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1915.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

DEPARTMENT OF LABOUR AND INDUSTRY.

REPORT

ON THE WORKING OF THE

FACTORIES AND SHOPS ACT 1912

DURING THE YEAR 1914.

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THE EIGHTEENTH SERIES OF ANNUAL REPORTS BY INSPECTORS APPOINTED UNDER THE FACTORIES AND SHOPS ACT, 1912, FURNISHED TO THE MINISTER FOR LABOUR AND INDUSTRY IN TERMS OF SECTION 19 OF THAT ACT.

The Under Secretary, Department of Labour and Industry, to The Honourable the Minister for Labour and Industry.

Department of Labour and Industry,

Sir, 31 May, 1915.

I have the honour to forward for submission to Parliament, in terms of section 19 of the Factories and Shops Act, 1912, Annual Reports on the operations of that Act by each of the Inspectors appointed thereunder, for the year ending the 31st December, 1914.

I have, &c.,

J. B. HOLME,

Under Secretary.

Report of Mr. C. J. Alderdice, Chief Inspector of Factories.

ADMINISTRATION.

DURING the year 1914 the Inspectorial Staff was kept fully employed in the work of factory inspection and the investigation of alleged breaches of the various awards under the Industrial Arbitration Act. The new areas in the Metropolitan, Newcastle, Western, and Albury Districts had to be traversed for the purpose of making a first inspection of premises for which application to register had been received, and also to pick up occupiers who, in ignorance of the provisions of the Act, had neglected to apply for registration. The Clerical Staff was kept working at high pressure, especially during the latter half of the year.

In the Metropolitan, Goulburn, and Albury Districts 10,191 and in the Newcastle District 323 cards of instruction were served on the occupiers of factories, as compared with 10,957 and 730 respectively in 1913.

Appointments and Changes in the Staff.

Industrial Inspector Young (Newcastle) was appointed an Inspector under the Factories and Shops Act on the 21st January, 1914, and Mr. T. V. Field was appointed an Inspector under the Industrial Arbitration Act and Factories and Shops Act on the 6th May, 1914, to fill the vacancy at Broken Hill caused by the transfer of Mr. Galwey to the Department of Public Instruction.

Industrial Inspector McEvoy was appointed an Inspector under the Factories and Shops Act as from the 18th August, 1914.

Industrial Inspectors Henstock and Waugh were appointed Inspectors under the Factories and Shops Act on the 4th November, 1914. Inspector Chambers resigned his position on the 23rd July, 1914.

A monthly record of operations under the Factories and Shops Act, comprising registrations and cancellations of factories, particulars of breaches, details of accidents, &c., appears in the "Industrial Gazette of New South Wales," the monthly publication of the Department.

Factory cards of instructions served on occupiers (duplicates filed in office):—

Metropolitan, Goulburn, and Albury Districts	10,191
Newcastle District	323
Western District	206
Broken Hill District	88
Total	10,808

Correspondence (exclusive of Departmental reports, &c.):—

Letters:—

Metropolitan, Goulburn, and Albury Districts	4,937
Newcastle District	1,380
Western District	779
Broken Hill District	418
Total	7,514
Circulars	8,381

Certificates of Fitness and permits to work:—

Metropolitan District	4,401
Newcastle District	345
Western District	25
Goulburn District	19
Albury District	6
Broken Hill District	18
Total	4,814

The Year's Statistics.

Owing to the outbreak of the war, a departure was made in regard to the date upon which the annual Statistics were collected, in order to ascertain to what extent the outbreak of the war had affected employment in the factories. The figures were obtained in October, showing those employed during the last week in September. At this time of the year there was a strong feeling pervading the minds of a large number of employers that a period of great depression would immediately set in, and efforts were made in many directions to reduce staffs wherever it was possible, while other employers continued with their full staff working shorter time. It is reasonable, therefore, to assume that under these circumstances, the statistics presented in the Annual Report for 1914 will represent the lowest number employed at any period during the year, as, by the end of the year, when the figures are usually collected, a certain amount of confidence had been restored to the minds of employers, both by the action of the Government in dealing with the serious question of unemployment, and by its undertaking not to dispense with the services of any Government employees. Some industries were seriously affected through being unable to obtain the necessary materials to enable them to carry on, while others have been kept excessively busy through very large orders from the Commonwealth Defence Department for various kinds of war materials for the troops.

On the 30th September, when the returns of employees were furnished, there were on the register of the Department in all districts coming under the operation of the Factories and Shops Act (Metropolitan, Newcastle, Broken Hill, Western, Goulburn, and Albury Districts) 5,993 factories, employing 90,141 persons, of whom 63,336, or 70·23 per cent. were males, and 26,805, or 29·74 per cent., females. These figures represent a decrease of 5,443 persons, as compared with the figures at the end of 1913; but the percentage of males on the total employment has not decreased, being 70·26 per cent. on the 30th September, 1914, as against 70·1 per cent. at the end of the previous year; the females representing 29·74 per cent., as against 29·9 per cent. at the end of 1913.

Details for each district of the numbers and sex of persons, class of factory in which they are employed, horse-power of machinery used, increase or decrease, &c., will be found in the Appendices.

Metropolitan District.

This district was declared by proclamation a factory district for the purposes of the Factories and Shops Act from the 1st February, 1897; was extended by proclamation from the 1st August, 1901; was further extended by proclamation from the 3rd October, 1911; and still further extended by proclamation from the 1st January, 1914.

Original area	535 square miles
Present area	5,414 „ „

The most recent addition to the Metropolitan District is the electorate of Allowrie.

On the 30th September, 1914, there were 4,579 registered factories in the Metropolitan District, employing 79,339 persons, an increase of 280 factories, but a decrease of 4,866 persons as compared with the figures at the end of 1913. This is the first occasion upon

DIAGRAM A.

Showing Percentages of Persons of each Sex, in Age Groups, of Total Number employed in the Metropolitan District, 1914.

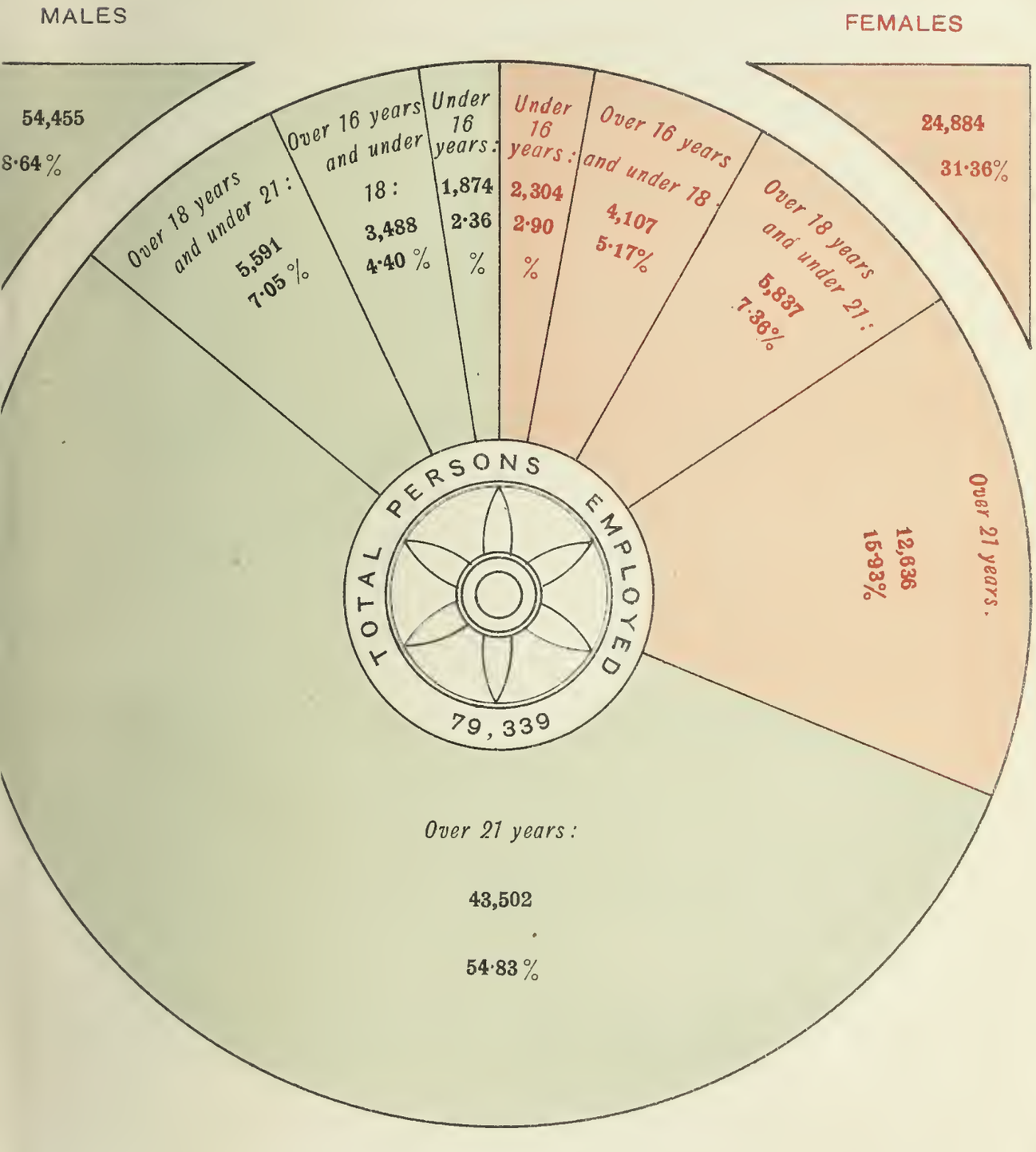
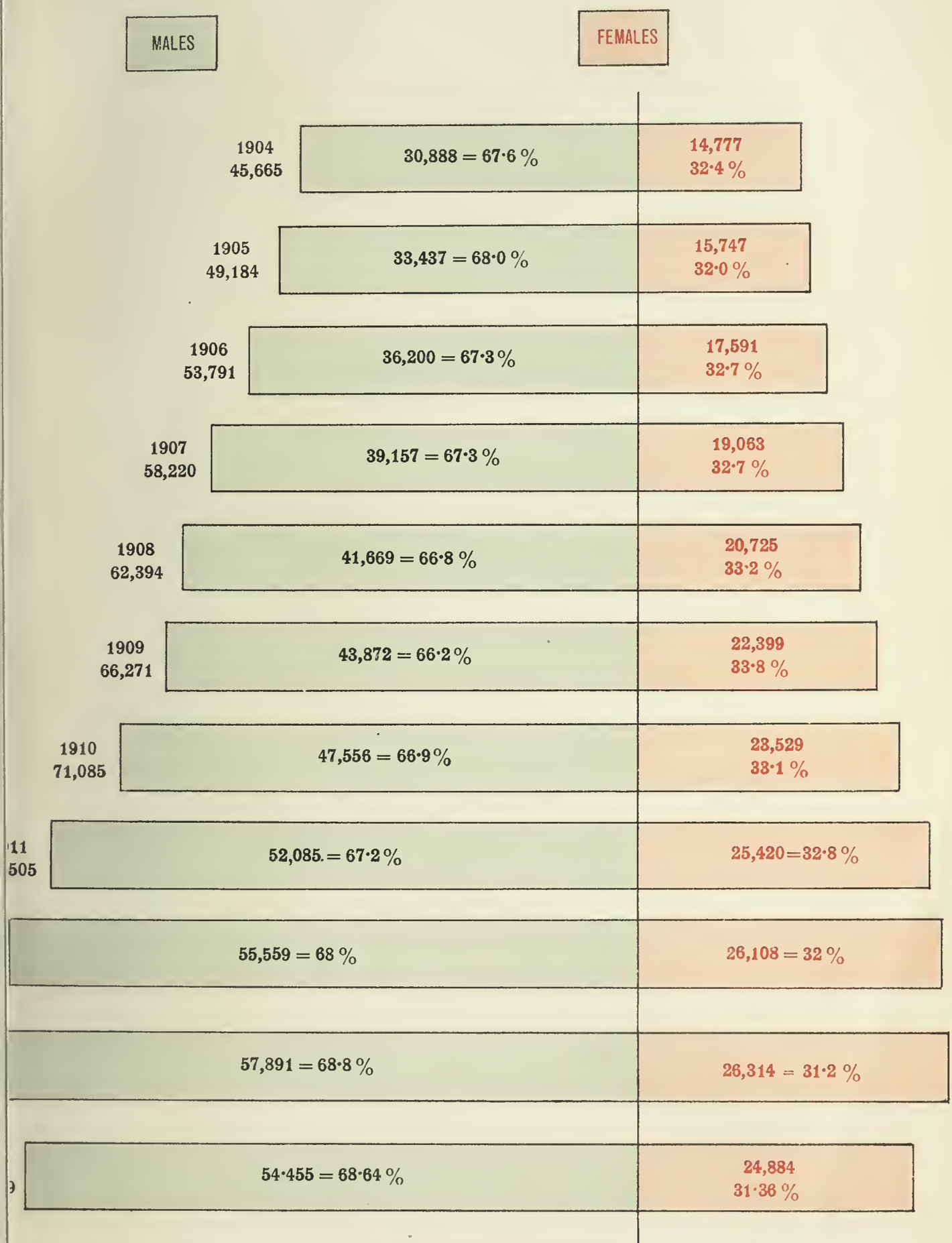


DIAGRAM B.

Showing Annual Totals and Percentages of Persons of each Sex employed in the Metropolitan District, 1904-1914.



upon which a decrease of persons employed in the Metropolitan District has had to be recorded since the Factories and Shops Act was passed in 1896, and is mainly due to the effects which the outbreak of the war had upon many industries at the time of the year when the figures were collected.

Of the total number of persons employed males represent 54,455 and females 24,884, or 68·6 and 31·4 per cent. respectively. Only 4,178, or 5·2 per cent. of the total are under 16 years of age; 7,595, or 9·8 per cent., are between 16 and 18 years; 11,428, or 14·4. per cent. are between 18 and 21 years; and the remainder, 56,138, or 70·8 per cent., are over 21 years of age.

Of the total males employed, 1,874, or only 3·5 per cent., are under 16 years; 3,488, or 6·4 per cent., are between 16 and 18 years; 5,591, or 10·2 per cent., between 18 and 21 years; and the remainder, 43,502, or 79·9 per cent., are over 21 years of age.

Of the total females employed, 2,304, or 9·2 per cent., are under 16 years of age; 4,107, or 16·5 per cent., are between 16 and 18 years; 5,837, or 23·4 per cent., between 18 and 21 years; and the remainder, 12,636, or 50·7 per cent., are over 21 years of age.

The number of females under and over 21 years of age are about equal, being 12,248 and 12,636 respectively, the difference being slightly in favour of those over 21 years, while in the case of males the number under 21 years of age is 10,953, compared with 43,502 over 21 years of age. There are more females than males under 21 years of age employed in the factories in the Metropolitan District, whereas the males over 21 years exceed the females over that age by nearly $3\frac{1}{2}$ to 1. (See Diagram A.)

During the previous five years the percentage of boys and girls under 16 years of age employed in factories in the Metropolitan District regularly and steadily decreased, but the percentage for 1914 shows a slight increase on that for 1913, as shown in the following table :—

	Males under 16.	Females under 16.
1909	3·17 per cent.	3·48 per cent.
1910	2·8 ,,	3·13 ,,
1911	2·6 ,,	3·1 ,,
1912	2·3 ,,	2·95 ,,
1913	2·24 ,,	2·85 ,,
1914	2·37 ,,	2·90 ,,

Taking the males and females under 16 years of age collectively, there was a steady and regular decrease during the previous five years, but this year the percentage was slightly increased on that for 1913, as shown in the following statement :—

	All persons under 16 years of age.
1909...	6·8 per cent.
1910...	5·9 ,,
1911...	5·8 ,,
1912...	5·2 ,,
1913...	5·1 ,,
1914...	5·2 ,,

Notwithstanding this increase it is, I consider, very satisfactory to be able to record that out of a total of 79,339 persons only 5·2 per cent. are under 16 years of age.

There was a less number of females employed in the factories in the Metropolitan District when the figures were collected at the end of September, 1914, than there were employed at the end of 1911, and while the number of males is greater than at the end of that year, it is less than the number employed at the end of 1912. (See Diagram B.)

At such a time it is somewhat interesting to note that the only industries which show any increase over the figures of the previous year are :—

	Increase in employees.
Oils and fats—animal and vegetable, &c.	39
Arms and explosives	7
Ship and boat building, &c.	49
Surgical and other scientific instruments	2
Heat, light and power	694

In every other industry there is a decrease, the largest numbers being in the following :—

	Decrease in employees.
Metal works, machinery, &c.	1,295
Connected with food and drink, &c.	610
Clothing and textile fabrics, &c.	1,177
Books, paper, printing, &c.	596
Furniture, bedding, &c.	517
Total	4,195

These industries account for a decrease of 4,195 persons out of a total decrease of 4,866.

The

The industry employing the greatest number of persons is, as in previous years, clothing and textile fabrics, with 22,250, compared with 23,427 at the end of 1913; followed by food and drink, &c., with 11,667, as against 12,277 in 1913; and metal works, machinery, &c., with 10,980, against 12,275 in the previous year. These three classes account for 44,897 out of the total of 79,339 employed in all classes of factories in the Metropolitan District.

The following statement will show the increase or decrease in persons, males and females, from 1905 to 1914, inclusive :—

Year.	Persons employed.			Increase.			Percentage of Total Increase.	
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
							Per cent.	Per cent.
1905 ...	33,437	15,747	49,184	2,549	970	3,519	.....	.....
1906 ...	36,200	17,591	53,791	2,763	1,844	4,607	59·9	40·1
1907 ...	39,157	19,063	58,220	2,957	1,472	4,429	66·7	33·3
1908 ...	41,669	20,725	62,394	2,512	1,662	4,174	60·2	39·8
1909 ...	43,872	22,399	66,271	2,203	1,674	3,877	56·8	43·2
1910 ...	47,556	23,529	71,085	3,684	1,130	4,814	76·5	23·5
1911 ...	52,085	25,420	77,505	4,529	1,891	6,420	70·5	29·5
1912 ...	55,559	26,108	81,667	3,474	688	4,162	83·5	16·5
1913 ...	57,891	26,314	84,205	2,332	206	2,538	91·9	8·1
1914 ...	54,455	24,884	79,339	*3,436	*1,430	*4,866	*70·6	*29·4

* Decrease.

Table showing increase in number of factories and persons employed therein during the period 1897 to 1914 :—

Year.	Number of Factories.	Increase.	Persons Employed.	Increase.
1897	1,673	...	29,595	...
1898	1,812	139	31,617	2,022
1899	1,909	97	34,235	2,618
1900	2,047	138	39,104	4,869
1901	2,195	148	42,273	3,169
1902	2,393	198	43,830	1,557
1903	2,430	37	44,003	173
1904	2,583	153	45,665	1,662
1905	2,680	97	49,184	3,519
1906	2,790	110	53,791	4,607
1907	2,840	50	58,220	4,429
1908	3,142	302	62,394	4,174
1909	3,396	254	66,271	3,877
1910	3,670	274	71,085	4,814
1911	3,843	173	77,505	6,420
1912	3,989	146	81,667	4,162
1913	4,322	333	84,205	2,538
1914	4,579	257	79,339	*4,866
Total increase		2,906 factories		49,744 persons.

* Decrease.

The mean annual increase in all persons employed in factories in the Metropolitan District for the period 1909–1914 is 4·5 per cent., while the actual decrease for 1914 is 5·7 per cent.

Of the factories on the Register of the Department at the close of the year in the Metropolitan District :—

4	employed	over	1,000	persons	each.		
4	,,	between	750	and	1,000	persons	each.
3	,,	,,	500	,,	750	,,	,,
3	,,	,,	400	,,	500	,,	,,
10	,,	,,	300	,,	400	,,	,,
26	,,	,,	200	,,	300	,,	,,
25	,,	,,	150	,,	200	,,	,,
57	,,	,,	100	,,	150	,,	,,
40	,,	,,	80	,,	100	,,	,,
65	,,	,,	60	,,	80	,,	,,
136	,,	,,	40	,,	60	,,	,,
134	,,	,,	30	,,	40	,,	,,
277	,,	,,	20	,,	30	,,	,,
693	,,	,,	10	,,	20	,,	,,
1,410	,,	,,	4	,,	10	,,	,,
1,692	,,	under	4	persons	each.		

From

From this table it will be seen that there are 132 factories, each employing from 100 to over 1,000 persons, and 652 factories, each employing between 20 and 100 persons, in the Metropolitan District.

A comparison of these figures with those for previous years will be found on reference to Table X.

The individual reports of the factory inspectors will be found on subsequent pages.

Newcastle District.

This district was declared by proclamation a factory district for the purposes of the Factories and Shops Act, from the 6th February, 1899; the area was increased by proclamation from the 1st August, 1904, and was further increased by proclamation from the 1st January, 1914.

Original area...	...	449 square miles.
Present area ...	...	4,579 „ „
Inspectors ...	...	Ralph C. Huntley. George R. Young. George C. Gregory.

The figures for the Newcastle District show an increase of 11 factories, but a decrease of 506 in the number of persons employed, of whom 289 are males and 217 females. The prospects at the beginning of the year were particularly bright, but the outbreak of the war caused a temporary falling off in many industries at the time the figures were collected. The chief industry affected was that of biscuit-making, the largest employer of female labour in Newcastle having transferred a large part of the works to their premises in the Metropolitan District, thus reducing their hands from 273 at the end of 1913 to 94 at the present time, a decrease of 179.

There is a continued improvement in the sanitary condition of the factories generally, in and around Newcastle, owing to the further extension of the sewerage system.

The establishing of the steel and iron works at Port Waratah, by the Broken Hill Proprietary Company, Ltd., will, no doubt, give employment to a large number of persons, and it is hopefully anticipated that when the figures are next compiled there will be a large increase in the number of persons employed in the factories in the Newcastle District.

Of the factories on the Register at the close of the year in the Newcastle District—

2	employed	between	200	and	300	persons.
3	„	„	150	„	200	„
3	„	„	80	„	100	„
5	„	„	60	„	80	„
12	„	„	40	„	60	„
13	„	„	30	„	40	„
26	„	„	20	„	30	„
57	„	„	10	„	20	„
172	„	„	4	„	10	„
290	„	under	4	persons each.		

Mr. Inspector Huntley's report upon the operations of the Act in the Newcastle Factories and Shops District will be found on a subsequent page.

Broken Hill District.

The Municipality of Broken Hill was declared by proclamation a district for the purposes of the Factories and Shops Act, from the 1st March, 1903.

Area	...	26 square miles.
Inspector	...	Frederick V. Field.

So much of Inspector Galwey's time had to be devoted to work under the Neglected Children's Act, that the work of factory inspection in the Broken Hill District was not receiving that attention which it demanded, and it was therefore decided to appoint an inspector whose services would be wholly at the disposal of this Department for inspection and investigation under the Factories and Shops Act, the Industrial Arbitration Act, and th Early Closing Act. Mr. Frederick V. Field was appointed to the position, and entered on duty on the 6th May, 1914.

As in other parts of the State the prospects at the commencement of the year in Broken Hill were very encouraging, but the outbreak of hostilities caused an immediate depression, owing to the mines losing the market for the lead and zinc concentrates.

When the figures were collected, there was an increase of 19 factories, but a decrease of 229 persons on the figures of 1913, males numbering 158, and females 71.

Of the factories on the Register at the close of the year—

2	employed	between	40	and	60	persons	each.
2	„	„	30	„	40	„	„
4	„	„	20	„	30	„	„
14	„	„	10	„	20	„	„
40	„	„	4	„	10	„	„
86	„	under	4	persons each.			

Mr. Inspector Field's report will be found on a subsequent page.

Western District.

Portion of the Hartley electorate was declared by proclamation a district for the purposes of the Factories and Shops Act from the 1st August, 1904. The provisions of the Act were extended by proclamation to the electorates of Bathurst, Blayney, and Orange, on the 24th August, 1911, and the area was further extended by proclamation to include the electorates of Lyndhurst and Mudgee from the 1st January, 1914.

Original area	657 square miles.
Present area	12,158 „ „
Inspector	W. J. J. Baker.

In the additional area which was included in the Western District the same unsatisfactory conditions were found to exist as in other areas when first brought under the provisions of the Factories and Shops Act, in regard to defects in sanitary arrangements, unfenced machinery, dilapidated premises, &c. Most of the industries in the Western District were in a prosperous state at the beginning of the year, but the outbreak of the war, as well as a period of drought over this area, caused a depression which, to some extent, affected employment in the factories. When the returns were compiled there were on the Register 308 factories, employing 2,968 persons, compared with 287 factories employing 3,026 persons at the end of 1913, an increase of 21 factories, but a decrease of 58 persons.

Of the factories on the Register at the close of the year:—

1	employed	608 persons.
1	„	356 „
1	„	202 „
1	„	77 „
2	„	between 40 and 60 persons.
6	„	„ 30 „ 40 „
9	„	„ 20 „ 30 „
23	„	„ 10 „ 20 „
101	„	„ 4 „ 10 „
163	„	under 4 persons each.

Mr. Inspector Baker's report will be found on a subsequent page.

Goulburn District.

This district was declared by proclamation a district for the purposes of the Factories and Shops Act from the 1st May, 1907; the area was increased by proclamation from the 3rd October, 1911, and further increased by proclamation from the 1st January, 1914.

Original area	870 square miles.
Present area	6,288 square miles.

There is an increase of 39 factories, but a decrease of 90 persons compared with the figures at the end of 1913.

Of the registered factories in this district at the end of the year:—

1	employed	60 persons.
1	„	31 „
3	„	between 20 and 30 persons.
14	„	„ 10 „ 20 „
45	„	„ 4 „ 10 „
124	„	under 4 persons each.

Albury District.

The Electoral District of Albury was proclaimed a district under the Factories and Shops Act from the 1st November, 1909, by proclamation in the *Government Gazette* of the 6th October, 1909, and this area was increased by proclamation from the 1st January, 1914, so as to include the electorate of Wagga.

Original area	3,350 square miles.
Present area	5,969 „ „

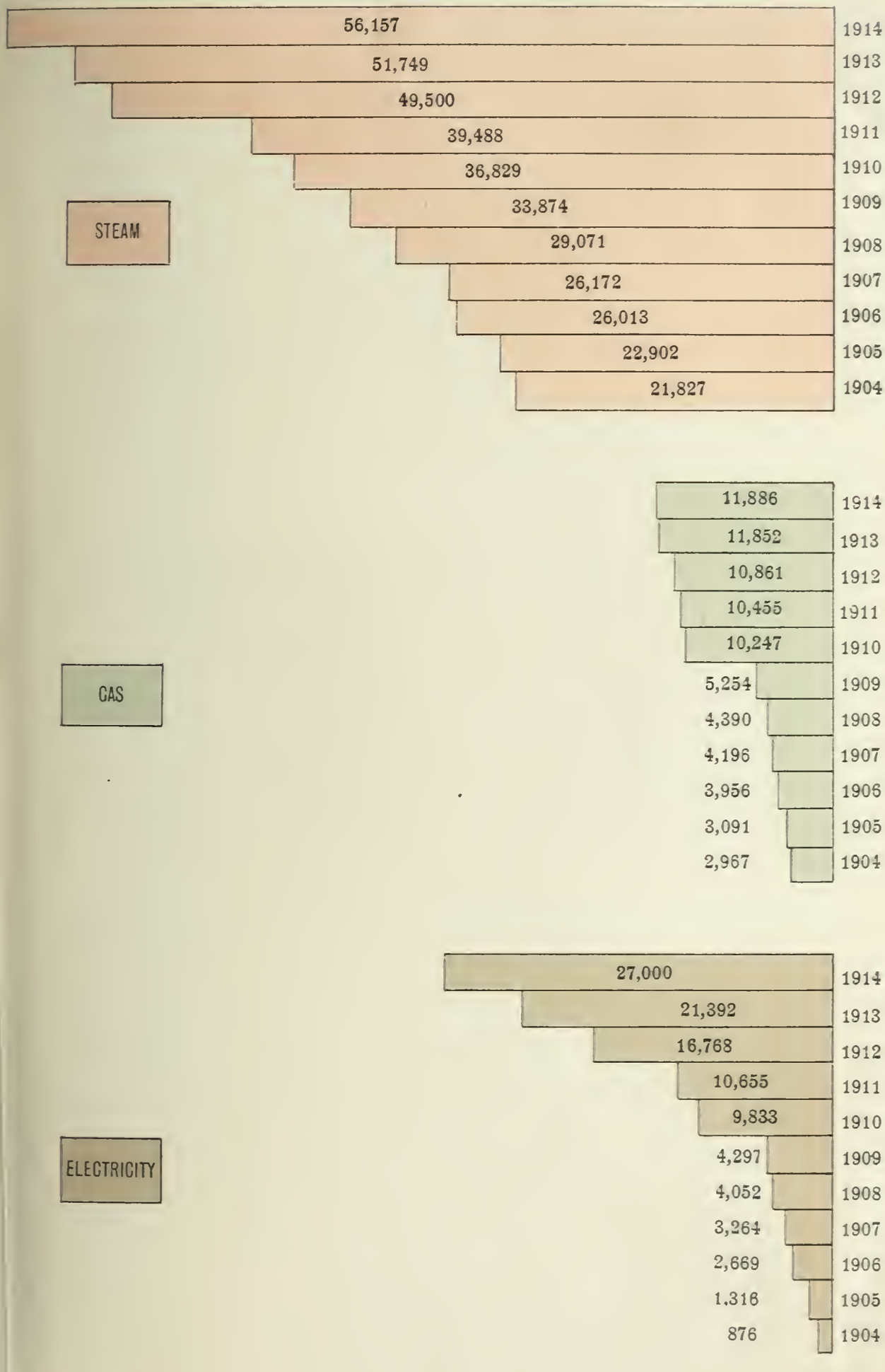
The inclusion of the electorate of Wagga is responsible for the increase of 71 factories and 330 persons in 1914, compared with the figures at the end of 1913.

Of the registered factories in this district at the close of the year:—

2	employed	between 30 and 40 persons.
5	„	„ 20 „ 30 „
12	„	„ 10 „ 20 „
53	„	„ 4 „ 10 „
115	„	under 4 persons each.

DIAGRAM C.

Showing Horse-power used in Factories in the Metropolitan District: Steam, Gas, and Electricity, 1904-1914.



Horse-power of Machinery.

The statistics of the horse-power of the machinery used in the factories in the various districts were collected at the end of the year, the previous returns being furnished at the end of 1912. Throughout the whole of the districts there were 4,047 factories using machinery equal to 115,801 horse-power, compared with 3,347 factories using machinery equal to 95,304 horse-power at the end of 1912, when the last complete statistics of machinery were collected, an increase of 702 factories and 20,497 horse-power. In the Metropolitan Factories and Shops District steam-power increased from 51,749 in 1913 to 56,157 in 1914, gas-power increasing from 11,852 to 11,886, and electricity from 21,392 to 26,983. From these figures it will be seen that there is a very small increase in gas-power, and a very large comparative increase in electric-power. The further extension of the City Council schemes of electric lighting will undoubtedly be followed by a further increase in electric power used in the factories, on account of its many advantages, especially in the smaller factories. Statistics of the horse-power of the machinery in the various districts at the end of 1914 will be found on a subsequent page, and a reference to Diagram C will show the horse-power of the machinery in the Metropolitan District, and to what extent it has increased under the various headings of steam, gas, and electricity since 1904.

Employment of Children in Factories.

Section 40 of the Factories and Shops Act provides that :—

> "No child shall, unless by special permission of the Minister, be employed in any factory; and no such special permission shall be given to a child under the age of 13 years."

"Child" means any person under the age of 14 years.

The special permission of the Minister is not granted unless the child is exempt from attending day school, either by having attained the necessary educational standard of efficiency, or by the authority of the Minister for Education where the circumstances of the family render it absolutely necessary that he shall, even at this early age, assist in the upkeep of the home.

Since the Minister for Labour and Industry decided in December, 1909, not to allow any girls under 14 years of age, except under the most extreme circumstances, to enter factory life, it has been found necessary to grant special permission in only 34 cases, or an average of seven a year for the last five years, whereas in the previous five years the number totalled 1,774, an average of 354 a year.

The number of persons under 16 years of age employed in factories and work rooms in the Metropolitan District when the figures were compiled was 4,178, of whom 1,874 were males and 2,304 females, compared with 4,297 at the end of 1913, of whom 1,892 were males, and 2,405 females, a decrease of 18 males and 101 females. The present may, perhaps, not be a fitting time to advocate any alteration in existing legislation which would disturb employment, even in respect of boys and girls between the ages of 14 and 16 years, but when industrial matters again assume their normal condition, and the war is at an end, it might be advisable to raise the age at which boys and girls may be employed in factories to, say, 15 and 16 years respectively.

Certificates of Fitness.

A person under 16 years of age may not be employed in any factory in which steam or other mechanical power is used, or in certain other factories as may from time to time be determined by regulation, unless the occupier of the factory has obtained certificate in the prescribed form of the fitness of such person for employment in the factory.

The medical officers of the Department of Health examine the children free of charge in the Metropolitan District for these certificates, but in the country districts a fee is charged, and in some instances it has been found that the charge has been as high as 10s. In my preceding Report I suggested that arrangements might be made with the Department of Health that the local Government medical officers should make these examinations at a nominal charge of 2s. 6d. on production of the form furnished by this Department, accompanied by evidence of the child's age.

The following statement shows the number of cases in which special permission was granted by the Minister for boys and girls to work in factories during the last ten years :—

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1905	186	102	288	1910	179	7	186
1906	232	83	315	1911	182	6	188
1907	306	135	411	1912	154	4	158
1908	213	121	334	1913	160	9	169
1909	248	148	396	1914	152	8	160

Certificates

Certificates of Fitness and Permits to Work.

The following table shows the number of Certificates of Fitness and Permits to Work issu during the year 1914, and also the class of factory in which the children were to be employed :—

Certificates of Fitness issued during 1914.

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Western.		Goulburn.		Albury.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females
Artificial flowers	1	26	...	...	...	...	...	...	1	...	...	...
Aerated waters	35	.....	1	2	4	...	...	...	...	...	...	...
Bedsteads, bedding	41	5	...	...	...	...	...	...	...	...	...	...
Biscuits	291	115	28	3	...	...	...	...	...	...	...	...
Bookbinding	6	176	...	...	...	...	...	...	...	...	...	...
Boots and shoes	105	149	...	...	...	...	...	...	2	...	...	...
Brass and copper	16	.....	...	...	...	...	...	...	...	...	...	...
Bread and pastry	11	6	2	...	...	...	1	...	...	...	...	...
Breweries	.. ...	.....	...	...	...	...	...	...	...	...	...	...
Brooms	4	1	...	...	...	...	...	..	...	...	...	...
Calico bags	14	31	...	...	...	...	...	...	...	...	...	...
Cement and lime works	3	.....	...	...	...	...	...	1	...	...	...	...
Chemicals and blue	40	61	...	...	...	...	...	...	...	...	...	...
Clothing	37	452	3	69	...	...	1	...	10	1	...	1
Coachbuilding	22	.....	6	...	...	...	..	...	...	...	...	...
Condiments	29	37	2	...	...	...	...	...	...	...	...	...
Confectionery	91	52	10	6	...	...	...	...	...	...	...	...
Dressmaking	1	275	...	22	...	...	...	...	...	...	...	...
Electric light and power	6	2	...	...	...	...	...	...	...	...	..	...
Engineering	143	.. ...	27	...	...	...	3	...	...	...	1	...
Flour mills	.....	3	...	...	...	...	...	...	...	...	1	...
Furniture	61	7	6	...	...	...	...	...	...	...	...	...
Glass and bottles	29	.....	...	...	...	...	...	...	...	...	...	...
Groceries and packing	52	52	5	10	...	...	...	...	...	...	...	...
Hats and caps	31	94	...	...	...	...	...	...	...	...	...	...
Ice and refrigerating	10	.....	2	...	...	...	...	...	...	...	...	...
Ironworks, stoves, &c.	69	.....	42	...	4	...	...	...	...	...	...	...
Jam	16	5	...	...	...	...	...	...	...	...	...	...
Jewellery	17	4	...	...	...	...	..	...	...	...	...	...
Kerosene and oil	5	1	...	...	...	...	...	...	...	...	...	...
Laundries	4	32	...	14	...	...	...	...	1	...	...	...
Leather bags, &c.	26	12	...	...	...	...	...	...	...	...	...	...
Marble and slate	7	.....	...	...	...	...	...	...	...	...	...	...
Meat-preserving	27	4	1	...	...	...	...	...	...	...	...	...
Motors and cycles	33	.....	...	...	...	...	...	...	...	...	...	...
Musical instruments	12	1	...	...	...	...	....	...	...	...	...	...
Paper boxes	63	84	...	...	...	...	...	...	...	...	...	...
Paper mills	7	13	...	...	...	...	...	...	...	...	...	...
Plumbers and tinsmiths	74	8	5	...	...	...	...	...	...	...	2	...
Potteries and Brickworks	31	.....	2	...	...	...	6	...	...	...	...	...
Printing	245	22	9	2	10	...	5	2	4	...	...	...
Rope	7	.....	...	...	...	...	...	...	...	...	...	...
Rubber goods	16	18	...	...	...	...	...	...	...	...	...	...
Sawmills and joinery	217	.....	25	...	...	...	...	...	...	...	...	...
Shirts	8	138	...	1	...	...	...	...	...	...	...	...
Smelting and ore works	8	.....	12	...	...	...	...	1	...	...	...	...
Soap, &c.	29	13	20	2	...	...	...	...	...	...	...	...
Sugar	.....	.....	...	...	...	...	...	...	...	1	...	...
Tanneries	30	1	...	...	...	...	...	...	...	...	...	...
Tents, &c.	4	8	...	...	...	...	...	...	...	...	...	...
Tobacco	73	54	...	...	...	...	...	...	...	...	...	...
Type-founding	4	10	...	...	...	...	...	...	...	...	...	...
Umbrellas	5	5	...	...	...	...	...	...	...	...	...	...
Woollen mills	45	69	...	...	...	...	...	1	3	...	...	...
Wool-scouring	16	2	...	...	...	...	...	...	...	...	...	...
Wire works	31	.. ...	...	...	...	...	...	...	...	...	...	...
Miscellaneous	76	37	6	...	...	...	...	...	...	...	...	...
Hosiery and Knitting	3	29	...	...	...	...	...	...	...	...	...	...
Total	2,287	2,114	214	131	18	...	19	6	18	1	4	

Special Permits.

The number of these permits issued to children between the ages of 13 and 14 is 160, details of which appear below.

Metropolitan District—		
Males	142	
Females	8	
		150
Newcastle District—		
Males		
Females		7

Western District—			
Males	2		
Females	—		
	—	2	
Broken Hill District—			
Males	Nil.		
Females	Nil.		
	——	Nil.	
Goulburn District—			
Males	1		
Females	—		
	—	1	
Albury District—			
Males	Nil.		
Females	Nil.		
	——	Nil.	
Total		160	

Accidents in Factories.

The return of reported accidents was compiled to the end of the year, and numbered 390 in the Metropolitan District, compared with 455 for the previous year. Taking into consideration the large number of factories now using more or less machinery of a somewhat dangerous character, and the large number of persons employed therein, the number of accidents is comparatively small, but this number could, in my opinion, be still further reduced by a reasonable amount of care on the part of the employee. It is not so much that he takes the risk, recognising the possibility of accident, as that he does not realise that he is taking any risk. Unfortunately, as early in the year as the 7th January, an accident happened at a wool-scouring works at Botany, which proved fatal. The engine was stopped for the purpose of removing a belt, and when the engine was again started, upon the signal being given, the belt went between two pulleys. In attempting to release it the loose end caught the man's foot and drew him up and around the shafting. The man was killed before the engine could be stopped.

On the 25th May, at a suburban brickworks, a man was killed in the pit of the fly-wheel of the engine. No person witnessed the accident, but it is surmised that in an attempt to oil the engine, he fell into the pit. The fly-wheel was properly guarded.

On the 30th May, at another brickworks, the man in assisting to start the conveyor-belt, sat on the wooden framework and, overbalancing, fell back on to the conveyer-belt. He was carried down on to the shafting, and then fell a distance of 16 feet, receiving injuries from which he shortly afterwards died. The belts were properly guarded.

On the 29th September a young man met his death, also at a suburban brickworks. A shot was about to be fired in the pit, and the signal having been given, the men were preparing to leave. A man who was working near the truck attempted to cross the line, when the wire-rope suddenly tightened and threw him under the truck, which passed over him. He was at once taken to the hospital, but died shortly after admission.

At a woollen mills on the 8th October, a belt had been taken off the pulleys, and unlaced for the purpose of tightening. A young man standing on the machine pulled the belt over the shaft, and was about to tie it up while another man re-laced the two ends. By some means the belt become wrapped around the shafting and the man standing on the machine, and he received severe injuries, and died as the result of same. The other man was, at the time, stooping to pick up the lace and did not actually see the accident happen.

On the 19th November, a young man, 16 years of age, was grinding the head of a bolt at an emery wheel in an engineering works, when the wheel broke, a portion striking him on the head, inflicting injuries from which he died shortly after admission to the hospital.

At a large engineering works a man, who was employed as belt repairer in the boiler shop, was in the act of attaching a 1¼-inch belt to a small centrifugal pump. In putting the end of the belt over the main driving shaft, his hand was caught between the belt and revolving shaft, and he was whirled round the shafting, his legs and body striking a beam as he revolved.

The individual machine which accounts for the greatest number of accidents is the circular saw. An effective guard is now on the market for this machine when ripping, but some difficulty is still being experienced in providing a suitable saw guard for the machine which is used for both ripping and cross-cutting. However, guards are being insisted upon wherever they can be provided, and with reasonable care on the part of the operators, I believe it is possible to effect a large reduction in the number of accidents on this dangerous machine.

The following statements give the details of the number of accidents in the Metropolitan and Newcastle Districts, the description of the machine at which the accident occurred, and the extent of the injuries received :—

Metropolitan District.

	Injury to hands.	Injury to arms.	Injury to legs.	Injury to feet.	Injury to head.	Injury to body.	Fatal.	Total.
Brickworks and potteries..	7	3	...	1	...	1	3	15
Boots and shoes.....	11	...	...	...	1	...	...	12
Engineering	49	6	1	4	3	4	2	69
Food, drinks, &c.	48	5	1	3	1	1	...	59
Furniture	16	...	2	3	...	1	...	22
Joinery works	44	1	...	...	...	4	...	49
Laundries	8	...	...	1	..	1	...	10
Metal works	28	2	...	1	2	...	...	33
Oils and grease	5	1	2	...	...	1	...	9
Paper box	5	...	...	...	...	...	...	5
Printing	39	4	...	1	...	1	...	45
Saw-mills	22	1	...	...	3	2	...	28
Tobacco	2	...	...	...	...	...	...	2
Tanneries and wool scours..	7	3	...	...	...	...	1	11
Woollen mills	4	...	...	...	1	...	...	5
Miscellaneous.....	9	2	...	2	...	2	1	16
Total	304	28	6	16	11	18	7	390

Description of Machines at, and causes through, which Accidents occurred.

Wood-working Machines—

Band saws	6
Circular saws	47
Hand planers	10
Moulders	7
Shapers	15
Morticers	4
Sand-paperers	4
Jointers	15
Wood-choppers.....	2
Pendulm saws	2

Metal-working Machines—

Lathes	12
Drills	8
Shears and punch	6
Rollers	2
Steam hammers	7
Riveters.....	2
Slotters	2
Other machines	5

Tin and Canister Machines—

Power Presses—

Stampers	16
Hingers.....	1
Swagers	6
Trimmers	1
Closers	3

Printing, Bookbinding, and Stationery Machines—

Embossing	1
Printing presses	13
Platens	8
Linotypes	1
Power presses (labels)	3
Envelope	2
Wire-stitchers.....	7
Box enders	1
Guillotine.....	3
Folder	3

Woollen Mills—

Carders.....	3
Looms.....	1
Other.....	3

Tanneries—

Rollers	1
Other.....	1

Tobacco, &c.—

Cigarette-making	2

Biscuits, Bread, and Confectionery—

Biscuit Machine	4
Dough rollers	5
,, dividers	4
Tea Packing	3
Confectionery	5
Other.....	1
Boot and Shoe machines	8
Rope machines	2
Meat-preserving machines	2

Brick machines .....

Leather presses .....

Breweries—

Corking machines.....

Laundry—

Calenders ....

Other .....

Miscellaneous—

Engines .....

Mill gearing ....

Hoists and cranes.....

Emery wheels .....

Explosions .....

Shocks and knocks .....

Burns and Scalds .....

Grindstones .....

Other ....

Total.....

Extent of Injuries received.

Fatal	7
Permanently disabled—	
Loss of hand	3
Partially disabled—	
Loss of fingers	20
,, parts of fingers	62
Fracture of arms.....	2
,, legs.....	2
,, fingers	2
,, foot	2
,, body	3

Cuts, Lacerations, and Bruises—

On head ....

,, arms .....

,, hands and fingers .....

,, body .....

,, legs and feet.....

Burns and Scalds—

On body ....

,, head and face .....

,, arms ....

,, hands and fingers .....

,, legs and feet.....

Shocks and falls .....

Total .....

Newcastle District.

	Injury to hands.	Injury to arms.	Injury to legs.	Injury to feet.	Injury to head.	Injury to body.	Fatal.	Tal
Engineering	6	2	...	...	...	...	...	
Food and drink.....	3	...	...	...	...	...	...	
Furniture	2	...	...	...	...	...	...	
Saw-mills, &c.	11	1	1	...	...	1	...	
Metal Works	1	...	...	...	...	...	...	
Smelting.....	1	...	...	3	1	1	...	
Laundries	1	...	...	...	...	...	...	
Brickworks and potteries	3	...	...	...	...	...	...	
Printing.....	...	..	...	...	...	...	1	
Total	28	3	1	3	1	2	1	

DESCRIPTION of Machines at, and causes through, which Accidents occurred.

Biscuits and Bread—	
Dough rollers	1
Biscuit machine	1
Engine (crank)	1
Smelting—	
At furnaces—	
Hopper	1
Hydraulic lift	1
Burns	4
Metal-working Machines—	
Lathe	1
Flour spindle driller	1
Steam hammer	1
Worm wheel generator	1
Bolt trimmer	1
Boring machine	1
Guttering machine	1
Wood-working Machines—	
Circular saws	8
Band saw	1
Shaper	1
Woodworking Machines (*continued*)—	
Surfacing machine	1
Morticing machine	1
Thickening machine	1
Jointer	1
Wood printing machine	1
Brickworks and Potteries—	
Brick press	2
Pipe press	1
Laundries—	
Shirt machine	1
Planing—	
Rotary machine	1
Miscellaneous—	
Electric crane	1
Mechanical stoker	1
Mill gearing	1
Total	39

EXTENT of Injuries received.

Fatal	1
Permanently disabled—	
Loss of forearm	1
Loss of hand	1
Partially disabled—	
Loss of fingers	2
Loss of parts of fingers	12
Fracture of arm	1
Burns—	
On body	2
On feet	1
Cuts, lacerations, and bruises—	
On body	1
On legs and feet	3
On arms	2
On hands and fingers	12
Total	39

Western District.

	Injury to hands.	Injury to arms.	Injury to legs.	Injury to feet.	Injury to head.	Injury to body.	Fatal.	Total.
Blast furnace	.....	.....	.....	.....	1	.....	.....	1
Brickworks	.....	.....	.....	.....	1	.....	.....	1
Cement works	.....	3	.....	.....	.....	.....	1	4
Flour-mill	.....	1	.....	.....	.....	.....	.....	1
Furniture	2	.....	.....	.....	1	.....	.....	3
Iron-moulding	.....	.....	.....	1	.....	.....	.....	1
Joinery	1	.....	.....	.....	.....	1	.....	2
Total	3	4	.....	1	3	1	1	13

DESCRIPTION of Machines at, and causes through, which Accidents occurred.

Blast furnace—	
Gas explosion	1
Brickworks—	
Mill gearing	1
Cement works—	
Scalds	3
Fall from stage	1
Flour-mill—	
Mill gearing	1
Furniture—	
Jointer	2
Scald (glue)	1
Iron-moulding—	
Burns	1
Joinery—	
Circular saw	2
Total	13

EXTENT of Injuries received.

Fatal	1
Partially disabled—	
Loss of forearm	1
Loss of parts of fingers	2
Temporary—	
Cuts, lacerations, bruises, &c.	3
Burns and scalds	6
Total	13

FIRE ESCAPE IN FACTORIES.

Each year the Department is experiencing less difficulty in dealing with the very important matter of efficient means of escape in case of fire in premises used for factory purposes. Plans for new buildings, any portion of which is likely to be used as a factory, are now invariably submitted to the Department before building operations are commenced, and an opportunity is thus given to determine the means of escape to be provided, as well as the sanitary arrangements of the premises. It is a little more difficult to deal with the matter in some of the older premises, but with the assistance which is so readily rendered by the Chief Officer of Fire Brigades and his Staff, satisfactory progress is being made. When alterations are made to existing buildings, the effect of which may materially impair the efficiency of the means of escape previously provided, the Department is not notified, and it is not until the Inspector again visits the premises, that it is found neeessary to insist upon certain alterations to make the means of escape effeetive.

During

During the year 45 reports were received from the Chief Officer of Fire Brigades that the means of escape provided in various premises in the city and suburbs were efficient and satisfactory in terms of section 39 of the Factories and Shops Act.

Overtime in Factories.

During the first half of the year the usual amount of overtime was worked, but after the outbreak of the war it was found that very excessive overtime had been worked in those factories which had received urgent orders from the Commonwealth Defence Department for clothing and various descriptions of war materials for the Expeditionary Forces. In some instances the overtime was neither recorded nor reported to the Department. It was at first intended to take legal proceedings against all those firms who had contravened any of the overtime provisions of the Factories and Shops Act, but the Minister subsequently decided that he would distinguish between firms which, in exceeding the time limits imposed by the Act mentioned in connection with contracts for military supplies, show themselves to be scrupulous in safeguarding the general well-being of their employees and in enabling this Department to closely supervise any alteration of factory processes which may be introduced by them, and firms which, by failing to keep records of work done or to report their operations to the Department, place themselves in a different category. Against the section of employers last mentioned, the Minister stated that he would not hesitate to enforce the law, notwithstanding the abnormal conditions which obtain by reason of the war.

Employers who exhibit the scruples referred to were, in the opinion of the Minister, not likely to be obstructed in the performance of the special services which the Federal Department of Defence had called for from them; but the Minister was compelled, in order that he might inform his mind in an ample manner as to whether employers were or were not reasonably considerate of the interests of their employees, to impose upon all employers a strict observance of those terms of the Factories and Shops Act which provide for notices and records.

During the year permission was granted by the Minister for Labour and Industry for the working of additional overtime in terms of Section 43 in the case of 14 factories affecting 2 males and 226 females. The following statement shows the class of factory in which the additional overtime was worked : —

Printing... ...	...	4 cases	affecting	80 females.
Hats and caps ...	...	3 ,,	,,	74 ,,
Tobacco, &c. ...	...	1 case	,,	30 ,,
Food stuffs ...	...	2 cases	,,	7 ,,
Furriers... ...	...	1 case	,,	3 ,,
Laundry ...	...	1 ,,	,,	20 ,,
Clothing ...	...	1 ,,	,,	4 ,,
Aerated waters...	...	1 ,,	,,	2 males and 8 females.

Prosecutions under the Factories and Shops Act.

During the year there were 177 informations laid for various breaches of the Factories and Shop Act, convictions were obtained in 168 cases, two only being dismissed and seven withdrawn.

The following are details of the convictions :—

Metropolitan District.

Section 7.	—Being in occupation of an unregistered factory...	5 cases.
,, 11.	—Obstructing an Inspector...	2 ,,
,, 14.	—Failing to keep records	1 case.
,, 20.	—Factory not in a cleanly state	6 cases.
,, 33.	—Unfenced mill gearing, etc.	29 ,,
,, 38.	—Failing to report accident	4 ,,
,, 39.	—Failing to provide fire-escape	1 case.
,, 40.	—Employee without special permit	2 cases.
,, 41.	—Working at prohibited machine	5 ,,
,, 42.	—Employment of female over five hours without interval	2 ,,
,, 43.	—Breaches in regard to overtime	55 ,,
,, 44.	—Employment in restricted part of factory ...	1 case.
,, 45.	—Employees without certificates	*22 cases.
,, 49.	—Employment outside hours of furniture factories	13 ,,
,, 68.	—Failing to pay tea-money	5 ,,
Regulation 15.	—Insufficient w.c. accommodation...	4 ,,
,, 16.	—Insufficient lavatory accommodation	4 ,,
,, 17.	—Insufficient drinking water	2 ,,

Newcastle District.

Section 20.	—Factory not in a cleanly state	1 case.
,, 20.	—Overcrowding in a workroom	1 case.
,, 33.	—Unfenced mill-gearing, &c.	2 cases.

Western District.

,, 7.	—Being in occupation of an unregistered factory...	1 case.
	Total	168 cases.

* Including 1 case in the Goulburn District.

Conclusion

Conclusion.

In conclusion I desire, on behalf of the officers of the Department, to thank the Department of Public Health, the Chief Officer of Fire Brigades and his staff, the Inspector-General of Police, the City and Suburban Municipal Councils, and other bodies who have so readily assisted in securing a reasonable compliance with the provisions of the Factories and Shops Act and Regulations.

INSPECTORS' REPORTS.

Superintending Inspector Taylor reports :—

The steady improvement shown in later years in the general condition of factories has been well maintained. In the latter half of the year, however, one effect of the war was to put a check on building construction, such as to prevent a number of contracts being let for the erection of new factory premises. I had instances brought under my notice where plans and specifications of new factory buildings had been prepared and tenders had been called for, but on the declaration of war all further action was stopped. Similar stoppages occurred in cases where manufacturers were about to make large and extensive alterations and additions to existing buildings. It will not be surprising if in the forthcoming year such checks, combined with the trade depression, have the effect of hindering to a material extent the good general advance made in the structural condition of factories.

Internal sanitary conditions have had due attention, and many improvements have been made in the lighting and ventilation of workrooms, also the necessary action has been taken in a number of instances to bring the closet accommodation up to the standard required by the Regulations.

Means of escape in case of fire for persons employed in factories continues to receive considerable attention. All such escapes must be provided to the approval of the Chief Officer of Fire Brigades. The responsibility of seeing that factories are provided with approved means of escape is on the Factory Inspectors, who, therefore, take the initiative steps to ascertain what means will be approved. The standard now required by the Chief Officer of Fire Brigades is at a much higher level than obtained in past years, when the powers of the Department in this respect were very limited, consequently many of the old escapes have had to be re-submitted, with the result that to bring them up to the efficiency required by the present standard, alterations have had to be made in many instances, and in some cases the escapes have had to be reconstructed. More or less material alterations have also been necessitated by the changes which have taken place in the structural conditions of buildings that have been provided with escapes, such as in a building of several floors, in which, when the plans were submitted, it was proposed to let off a whole floor to one tenant, and the escape was erected accordingly. It was found subsequently that the owner, for purposes of perhaps more satisfactory letting, had partitioned off various floors into sections for several tenants, and by so partitioning had cut off ready access to the escape. The consequence was that on the matter being again submitted to the Chief Officer of Fire Brigades he required further alterations to be made to meet the changed conditions. Unfortunately, owners do not inform Inspectors when such partitioning is about to be made, and it is only on an inspectorial visit that the matter comes under his notice. The additional expense occasioned by the further alterations would probably be avoided if the Department were informed in the first instance of the proposed change, as the partitioning could then be done to meet the requirements of the Chief Officer.

Of the accidents into which I inquired during the year, the following are most noteworthy :—

The unfenced condition of the fly-wheel of a machine led to a fatal accident to a young man employed in an ironworks. Some time prior to the accident an Inspector visited the factory, and left instructions (amongst other items) for the fly-wheel of this machine to be fenced, and on a subsequent visit found the machine to be satisfactorily fenced. From inquiries made at the time of the accident it appears that some short while previously some alterations were needed to the machine, and for this purpose the fencing was taken down. When the machine was put in order the fencing was not replaced. This fly-wheel was also used as a driving wheel, a 6-inch belt being used. Just prior to the accident the machine "choked," and caused the belt to "slip" on the wheel. The unfortunate man, who was the operator of the machine, attempted to get the machine in motion by putting his foot on a spoke of the wheel for leverage and weight and at the same time pulling the rim with his hands. The belt slipped off the wheel and must have lapped round his leg, as he was caught in the belting and carried up to the main shafting and whirled around, receiving such injuries, caused by his head and body striking the cross-beams in the roof, as to result in his death. Proceedings were instituted by the Department for the unfenced condition of the machinery and the occupier was fined. The relatives of the deceased received compensation.

A serious accident occurred in a large confectionery establishment, in that part of the factory where the "boiled" lollies are made. The mixture is emptied from the vat in which it is boiled on to a cooling table, it is then cut into pieces, and while in a soft state run through a lolly rolling machine; the rollers of this machine are indented with

with the pattern of the shape of lolly required. After passing through this machine, which is operated only by adults, the sheets run on to a long table or slab and are there "broken up" by boys. Notwithstanding the fact that he had been warned, and hunted away from the machine a few minutes previously by the operator, one of these boys again went to the machine whilst the operator's back was turned, and for some unknown reason placed his hand on the running rollers, the result being that his fingers were drawn in and so severely crushed that four of them were amputated at the Sydney Hospital. This is one of those machines for which, so far as is known, an efficient guard has not been designed. Several attempts at guarding have been made, but none have proved effective, the difficulty being the indentations in the rollers, together with the space required for feeding.

In the same establishment one of the proprietors acts as works manager and overseer. Whilst on his rounds he noticed a piece of "dough" on a running pulley, which was properly fenced. Instead of stopping the machine for the purpose, he picked up a stick, put his arm over the fence, and attempted to knock the dough off the pulley while the machine was running. The stick was struck by the pulley in such manner as to throw his arm into the "bite" of the belt, and the result of his foolish action was a fractured arm.

In a printing establishment the belt which drove a printing press broke. The machinist then set about repairing it. When ready for lacing he asked a youth to hold the belt whilst he laced it. The belt was over the main shafting, and the youth had to hold it clear; whilst doing so his arm was struck by an adjoining pulley and fractured.

In a marble and slate work a circular saw is used for cutting slabs of slate. It is set in the centre of a wide bench and is fed automatically, so that there is no need for handling the materials until after the cut is made. The operator of this machine attempted to remove a slab which had been cut through, and instead of stopping the machine or going to the taking-off side, he got on the bench on the "wrong" side and reached across the saw, which was running. His arm came in contact with the teeth and was lacerated. Fortunately the saw runs very slowly, so that the cut was not a severe one.

In one of our large canister works much trouble has been experienced in getting the occupier to effectively safeguard his machinery. He has been prosecuted on several occasions. An accident having been reported at this particular factory, investigation disclosed the fact that a youth had been operating an unguarded power-press and had lost the ends of two fingers. The cause of the accident was the usual one, that is, in attempting to remove a piece of tin from under the die the plunger came down and struck his fingers. There are several well-known guards for this very dangerous machine. Some employers are under the impression that a greater output can be obtained from these machines without a guard, and the reason why, in some cases, they are found unguarded is obvious. In this instance the occupier was proceeded against for the condition of the machine.

Legal proceedings were instituted against a number of occupiers of factories during the year, and of those in which I prosecuted the following are, perhaps, of most interest:—

An employer was proceeded against for obstructing an Inspector in the execution of his duties. A complaint had been made that the Act was not being complied with in this particular workshop. Two visits had been made, but the Inspectors had not been able on either occasion to obtain any information, as the employee concerned refused to answer any question. On a third visit the assistance of a police officer was obtained, and the employer not only threatened the Inspector but also told the employee not to answer any questions. A penalty of £5 and costs was imposed.

An Inspector, on visiting a joinery works to inquire into an accident which had happened at a circular saw, found that the guard, which had been previously ordered, was swung out of position and important parts of it missing. Notwithstanding the fact that an accident had happened through the saw being unguarded, the Inspector saw two other employees then working at it, and no attempt had been made to repair the guard. Proceedings were instituted, and the employer was fined £5 and costs.

A tin-canister maker again paid a penalty of £10 and costs for failing to securely fence a power-press. This employer has now paid a considerable amount in fines for this offence.

Another occupier was proceeded against for an unfenced power-press. The Inspector, on entering the workroom noticed the foreman speak to the press operator, who immediately left the room, and, as the electric light near the press was also suddenly switched off, the Inspector's curiosity was aroused, and a closer view of the press when the light was turned on again showed that the guard was not attached. The result was a prosecution, and a fine of 40s. and costs was inflicted.

A penalty of £10 and costs was imposed on an employer for not providing proper closet accommodation for his employees. The facts were that males and females were employed, the employer originally had accommodation for both sexes (one for each). His business increased, and he put on a proportionately large number of men, the closet that had previously been set apart for the women was then apportioned to the men, so that from that time up to the time of the Inspector's visit there was no accommodation at all for the women.

A report was made to the Department that a boy 11 years of age had met with an accident in a factory. An inquiry showed that a small joinery and furniture factory had started operations without application to register having been made, and it was

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in this factory that the boy had the top of a finger taken off in a planing machine. The occupier was proceeded against on two charges, the first being for being in occupation of an unregistered factory, in which a conviction was obtained and a fine inflicted. The second charge was for employing a child in the factory. The only evidence I could put forward was that of the boy, who stated that he was in his mother's yard next door to the factory, and that the defendant called him in and asked him to sweep out the shavings, &c., promising a small payment, and that he then asked him to take the wood out of the planing machine, which the defendant was feeding. In attempting to do this he met with the injury. The defendant gave a total denial to the statements made by the boy, saying that he did not call the boy in nor ask him to do anything. The magistrate, in dismissing the information, said that he gave the defendant "the benefit of the doubt."

An engineer was fined £5 and costs for not fencing the bevel-wheels of drills in his factory. He had been allowed ample time in which to complete the guarding, and had also been definitely warned, but apparently took no notice of the warning.

Another case of obstructing an Inspector was taken, and in which a conviction was obtained. The Inspector had visited a factory—an ironworks—and had left certain instructions *re* the fencing of machinery. On a subsequent visit to see if the instructions had been carried out, he was refused admittance by the son of the occupier. The Inspector pointed out to his obstructor his liability for such action, but admittance was absolutely refused. A penalty of £5 and costs was imposed. On a later visit it was found that the machinery was not even then fenced; the occupier was further proceeded against and fined.

A complaint had been made that a furniture manufacturer was working on Saturday afternoons and Sundays. The premises were situated in a side street, and were not registered as a factory. The result of the Inspector's investigation was that the occupier was aware of the requirements of the Act, and apparently his omission to register was with a view to keep the knowledge of his working from the Department. He was proceeded against and fined for both breaches, viz., being in occupation of an unregistered factory, and working during prohibited hours.

Interesting points were taken for the defence in a case in which the offence charged against a large firm of manufacturing chemists was the employing of females on overtime for more than three hours on one day. The work was done on Easter Sunday, and the girls were employed on the whole of that day making up small packets of samples for advertising purposes at the Agricultural Show. The first point raised was that the work done on Easter Sunday was not overtime, as that day was not an ordinary working day, the contention being that overtime could only happen on a day on which ordinary work was performed. The second point was that as the girls had not worked on Good Friday the firm was within the law in employing them on Sunday, in that an aggregate of 48 hours for the week had not been exceeded. The magistrate, however, did not hold with either of the contentions put forward by the defence, and convicted in all cases, a penalty of 20s. and costs being imposed in each case.

Some of the larger firms appeared to be under the impression that it was not compulsory under the Act to pay overtime rates to the higher-paid employees, such as manageresses and forewomen of workrooms when overtime was worked. In several instances where such payment had not been made proceedings were instituted and various penalties imposed.

Penalties up to £5 and costs were imposed on occupiers of factories for not keeping their factories in a cleanly state.

Superintending Inspector Armitage reports :—

During the past year, up to August, factories have been very busy. Since August, the docks and shipbuilding yards have been exceptionally busy, their resources and plant being taxed to the utmost in the fitting out and re-docking of transports. In spite of the war, 1914 may be styled a year of progress in the industrial world.

At the end of the year, considering the great world upheaval, things have adapted themselves wonderfully to war conditions.

Three large brickworks on the northern side have been closed down; also one large factory on the northern side has been removed to the city.

It is in the building trades and those allied that the shock is felt most severely, for in spite of the money market being normal, investors and speculators are inclined to go very steadily, and, in many cases, to slow down altogether.

At Kerosene Bay extensive gasworks are being made, an extension of the North Shore Gas Company.

The steam brickworks in the Manly district, with their modern equipment and appliances, have been so successful that they have compelled the few yards that made hand bricks, known as "sand stocks," to close down. I believe these to be the last of the sand-stock bricks made in the Metropolitan area.

The Radium Hill Company is successfully treating ores and extracting radium at their works on the Parramatta River. These works, which a few years ago were in the experimental stage, are now an established success.

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The British Imperial Oil Company has in addition greatly extended its works.

Both in the city and country occupiers show a decided willingness to carry out the provisions of the Factory Act, the one exception being that small factories which install power fail to notify the Department or to register. But on the whole the work differs greatly from that of eighteen years ago. At the present time the majority of industries are covered by awards, and no award for juvenile labour is below the minimum wage of 4s. provided by the Factory Act, and all provide for overtime. All this makes the provisions of the Act relating to overtime more thoroughly observed.

The towns of Richmond and Parramatta have installed an electric-light plant, which is run by a private company, and the town of Windsor is having a plant installed by a private company, to light the town and supply the power. This will increase the number of factories in the town.

Of late, owing to good seasons, the condensed milk factory at Windsor, an interesting venture, has been very busy.

The Municipal Council works at Penrith, which gave difficulty in enforcing the provisions of the Act, have now fenced the plant, and work is proceeding satisfactorily.

The city of Goulburn has successfully installed its electric light plant. This is a continuous service, and advantage is being taken by the smaller factories to install electric power in place of steam and gas.

The malting-house at Mittagong has completed extensive additions.

Building operations are very active in the towns of Goulburn and Crookwell. Half of the town of Crookwell having been burnt down, some handsome brick shops now take the place of the old structures, and the steam brickworks are kept going to their full capacity. The city of Goulburn has participated in the building boom, and its steam brickworks, only started this year, are going on successfully. The difficulty of obtaining bricks there is overcome by its erection and successful production; also the new lime-kilns have installed machinery for air-compressor rock drills. In the Goulburn district great argument and opposition have been raised by the substituting of concrete for wooden floors in bakehouses, but the cement floors are a great improvement on the wooden ones. Even on the floors with a tongue and grooved joint the flour finds its way into the joints, for there is always a certain amount of shrinkage.

With some notable exceptions described in previous reports, the ordinary country factory has regard to no standard of building nor equipment. With these few mentioned exceptions factory conditions in the country need improvement. Wages are lower in the country, but the need for dining-rooms, &c., is not so pressing as in the city. Moreover, the country occupier is usually just making a living, his business is not a money-making concern, and such improvements must be very gradual.

Still, though the unwillingness to inflict hardships on one who is only making a living is laudable, the Act might be amended so as to include structural repairs and renovations under the phrase "structural alterations." The need for this amendment is more obvious in the country than the city.

SENIOR INSPECTOR BURKITT reports:—

Extension of Metropolitan District.—At the beginning of the year the electorate of Allowrie was brought under the operation of the Act, and in January I attended at various centres of the electorate, on duly advertised dates, to receive applications for registration and give information to the occupiers of factories. The number of persons who made application, or approached me for information, was exceedingly small, considering the number of factories in the district. However, from various sources I gathered information regarding those who should be registered, and on my return to Sydney they were notified of their obligation in this respect. A month later I made a tour of the district, which extends from south of Wollongong to the north of Bateman's Bay, inspecting 69 factories. As was to be expected, I found that in nearly every place where machinery was used the most elementary attempts at guarding had been neglected, and this applied even to certain branch factories owned by people whose main business was in the Metropolitan area, and who had been conversant with the requirements of the Act for years, showing that, unless the law compels, matters of this nature are, at least, overlooked. At one sawmill I was shown a short length of shafting which was very carefully guarded then, but at which an employee had received very serious injuries a week or two before the factory was subject to the provisions of the Act, which imposes a direct obligation on the occupier to guard machinery of this character. One result of my inspection in this district was that I came away more than ever convinced of the desirability of extending the operation of the Act to the whole State, for, even though inspections might be few and far between, the obligation on the employers to securely fence and guard dangerous machinery would, without doubt, tend to reduce the risks run by workers.

Newcastle District.—During the year I was on duty in this district for a fortnight, while the local Inspector was on leave, and while there visited places in which he had been unable, owing to other duties, to inspect, including Wyong and Ourimbah, where I found it necessary to order more up-to-date machinery guards in several factories.

Accidents.

Accidents.—I regret to report that in my district three fatal accidents occurred. The first was caused by a man falling from a great height down an external lift well. Section 38 does not require an accident of this nature to be reported, though section 36 renders it necessary for proper safeguards to be provided. It appears that the gates to the well in question were not up to the standard required by the Lifts and Scaffolding Act, and the Inspector had ordered new ones to be provided, but before these were ready to be fixed, the old ones had been removed, when a man who was pushing a truck of coal to the lift, failing to notice that the latter was at the ground level, fell down the well. Proceedings were taken by the Inspector of Lifts and Scaffolding, and the maximum penalty (£20) was imposed on the occupiers of the factory. The second fatality happened at a brickworks, where a man employed in the pit attempted to step over the wire rope used for hauling trucks of shale to the surface, just as the hauling machinery was put into operation; he was thrown under the truck and killed. The victim of the third fatal accident was a young man, working on a night-shift at a factory where materials were being manufactured for army use. A belt, which required shortening, had been unlaced, taken down, and re-punched. He then stood on a structure, passed the belt over the shaft, and was preparing to secure it free of the shaft while a man below laced the ends. By some means the loose belt became wrapped round deceased and the shaft, the injuries received being so serious that he shortly succumbed to them. Two accidents occurred at machines from which the guards had been removed, and in each case the occupiers were prosecuted and fined, and, as a sequel to a fatality which occurred at the end of last year, a firm was heavily fined for a similar offence. A man lost three fingers while working at a brick press, and a lad portions of three at a dough-rolling machine. These are both machines for which guards have not been found practicable, and therefore demand the greater care in working.

Prosecutions.—In addition to those named above, I reported a number of breaches of various sections of the Act, and in each case proceedings were taken and penalties imposed. For the first time during the sixteen years of my service in this Department, I was refused admission to a factory, the excuse being that the senior partner in the firm had left instructions that no one was to be admitted in his absence. The offender in this case was mulct in the sum of £5, and shortly afterwards the same firm was fined for failing to carry out my instructions to guard certain portions of their machinery. Employers of boys and girls require to be very careful to make sure of their ages before engaging them. A slight injury was sustained by a girl who was said to have given her age as over 16 years, and from whom, therefore, a certificate of fitness was not demanded. On making inquiries, however, I found that she was not yet 14 years old, and consequently could not legally be employed without special permission of the Minister, which had not been obtained. The firm strongly resented prosecution because, in the opinion of the manager, the girl appeared to be not less than 16 years of age. This is a responsibility which no one need take, as, where any doubt exists, a young person's age can always be verified, free of charge, by making application to this Department.

Sanitation, Structural Alterations, &c.—The extension of the sewerage system to portions of the district hitherto unserved has rendered it possible for sanitary improvements to be made in a number of factories, and many other structural alterations have been carried out at the expense of the owners of premises; lime-washing and cleaning have also been attended to with fair regularity. The Sydney architects do not yet appear to be fully seized of the necessity for submitting plans for approval before building. The owners of one large new factory in my district were put to considerable extra expense on this account, for when, after several warnings from me, the plans were laid before the Chief Officer of Fire Brigades, the structure being then nearly completed, costly alterations were required before certificates could be issued, which could have been provided for in the original plans and specifications.

SENIOR INSPECTOR HASTIE reports:—

The industrial progress of our commercial interests in some industries has had a serious set-back on account of the war, and there are others that have not been so busy for many years. With several other Inspectors I investigated the labour conditions in the different branches of various industries; my investigations were confined principally to the engineering trades, and during my visits I found that conditions were practically normal. The secretary of the Amalgamated Society of Engineers informed me that there were then fewer members of that society out of employment than he had ever known.

Child Labour.—The provisions of the Act relating to child labour have not created any serious difficulty in my district during the year. I do not wish to infer that there has been no violation of the Act, but the number is comparatively small. I am quite sure that the law in this matter is well known to factory occupiers, and any breach is usually followed by prosecution. In some instances, factory occupiers in this district will not employ any person who is under 16 years of age, thus avoiding any trouble in this respect.

Sanitation.—This comprehensive subject is never absent from the Inspector's mind, and its importance appears to grow on every hand, year by year. Insufficient or unsuitable conditions in which conveniences are kept, is perhaps the worst feature,

This applies to old premises where several tenants occupy workshops in the same building and the same conveniences are used by all, or most, of the tenants. The plans of new factory premises are now invariably submitted to the Department, when any defects in this matter are pointed out. I have always endeavoured to secure the most sanitary conditions possible. When I say "possible," I am keeping well in mind the fact that the facilities for sanitary conditions vary very much under different circumstances.

Complaints.—I have received very few complaints from employees in factories for the past year. I am in doubt whether this is gratifying or otherwise. A notice card is posted in every factory (or should be) with the names of the Inspectors, for the purpose of acquainting the employees to whom complaints may be made if there is any violation of the factory laws.

Fire Escapes.—This matter has again taken up a considerable portion of my time. The Act provides that all such means of escape in case of fire shall be approved in writing by the Chief Officer of Fire Brigades, or any officer appointed by him in that behalf. In an eight-storey building in Sydney, part of which was to be used for factory purposes thereby necessitating the erecting of an additional means of escape, plans were submitted and approved by the Fire Brigade officer, and the structure was erected, but the Fire Brigade officer declined to recommend the issuing of a certificate on account of the inflammable nature of the contents of the building. This was a serious matter, as the structure was erected on account of the firm applying for registration as a factory, and the Department could not issue a certificate of registration without the means of escape in case of fire being approved by the Fire Brigade officer. This difficulty was got over by the firm discontinuing that part of the business to which particular exception had been taken by the Fire Brigade officer.

Accidents.—In the absence through sickness of the Inspector in whose district the accident occurred, I was instructed to investigate the cause of a fatal accident to a youth employed at an engineering works. He was grinding the head of a $\frac{3}{4}$-inch bolt at an emery wheel; the bolt by some means jambed between the rest and the wheel and burst the wheel into three parts, one of which hit the youth on the head, causing injuries which proved fatal. If rests at grinding wheels are securely fastened and placed in a position giving the wheel sufficient space to revolve without touching the rest, and no more—say, $\frac{1}{32}$ of an inch—accidents of this nature would be avoided.

The gradual substitution of emery wheels for ordinary grindstones is a desirable change, not only from a health point of view, but because artificial stones are more homogenous in structure and are tested, whereas the natural stones are uncertain in many ways and, so far as I am aware, have had no test at any velocity higher than that at which they may be used. Our regulation for the speed at which emery wheels may be run is that indicated on such wheels by the makers, as the limit. In Germany a peripheral velocity of approximately 3,000 linear feet per minute must not be exceeded. In Britain, in many of the textile and engineering works, the skilled heavy grinders recognise a table of surface velocity varying between 3,000 and 3,300 linear feet per minute. A surface velocity of 5,000 linear feet per minute is generally advocated by makers of emery wheels; for cutlery and precision grinding machine tools 6,000 linear feet per minute is adopted. There is a factory in my district in which an emery wheel is run at 10,000 feet per minute. Personally, I am of the opinion that for general purposes where unskilled grinders operate on emery wheels, the periphery velocity should be limited to 3,500 feet per minute.

Cranes.—A very serious accident happened at an engineering works, by which a young man was severely crushed by an electrically-driven overhead travelling crane. The rails for this crane are about 15 feet above the floor; this man was standing on top of the rail girders, adjusting the hand rope on a small crane that operates in the adjoining bay, when the electrical crane came along and crushed him against one of the uprights.

This class of crane is used principally in general engineering and boiler-making works. The old type of noisy overhead cranes, driven by square shafting, belts and ropes, have been superseded by electrically-driven cranes; they are mounted on overhead rails, running from end to end of the shop bay, and in addition to the longitudinal travel the cab carrying the motor has also a transverse travel across the bay; the driver controls the movements from the cab suspended from the transverse girders, supporting the cab. These cranes often attain a speed of from 300 to 400 feet per minute, whereas the old type and similar capacity would be speeded up to about 100 feet per minute. The electrically-driven crane is almost silent in action, and therein lies the danger; the driver cannot always have a clear view of the track from end to end of the bay; and, moreover, his attention is usually concentrated on the load he is carrying and the signals of the workmen below. To prevent accidents whilst the crane is travelling, I would suggest that a warning gong be provided.

Power presses.—During the year no serious accident has occurred at these machines in the area under my supervision.

There is no class of machine that requires such a varied number of guards as the power-presses on account of the varied tools employed, the different designs of work to be done, and the frequent changes in the character of the die. An excellent guard for one machine or a particular kind of work may be entirely useless for another machine or class of work. Guards for this class of machine are always being improved. Quite recently the double-handled starting device by which each hand has to manipulate a lever before the machine can be started, thereby ensuring the hands being clear of the

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die, was thought to be infallible; but recently I investigated the cause of an accident at a power-press having a long stroke and a slow motion and fitted with the double handle, by which the machinist lost one of his fingers by attempting an adjustment after the machine was in motion. Taking into consideration the number of machines of this class employed in these factories there are comparatively few accidents. In my opinion, this is due to the efficient manner in which these machines are now guarded.

Transmission Machinery.—Mill gearing (by which is included the motion from the first moving power to the operative part of the machine) :—

At an engineering works the belt repairer in the machine department of the boiler-making shop was fatally injured by being caught with a 1¼-inch belt. This belt was used for driving a small centrifugal pump, attached to a large band-saw, which is used principally for cutting the fire-box ends of locomotive boilers. The belt has a velocity of 80 linear feet per minute, and runs on a 3-inch shaft, no pulley being necessary. From evidence adduced at the coroner's inquiry—which I attended—the deceased stood on the top of the machine framing, which is 8 feet from the floor, to throw the end of the belt over the shaft, the shaft being about 3 feet above him and about 2 feet off from him in a perpendicular line; when he threw the belt over the shaft it took a turn round the shaft, the end of the belt going under the part he held in his hand. In attempting to free it his hands became entangled in the belt, and he was whirled round the shaft, and before the machinery could be stopped both of his arms were torn from his body, and his legs and back were broken.

Senior Inspector Miss Duncan, reports :—

My report on the operation of the Factories and Shops Act for this year must of necessity be a brief one, covering only the period between 1st January and 9th March, from which date the Public Service Board had been pleased to grant me recreation and extended leave, in consideration of the fact that after seventeen years of service my strength was then no longer equal to the strain imposed upon it by the duties of my office.

During the month of January some time was devoted to enquiry and statistical work in connection with the annual report. In addition to this I was engaged on special work in connection with applications for registration of factories and investigation of complaints, all involving work which took me far and wide through the city and suburbs, but presented no features of special interest.

In connection with registration of new or re-registration of old factories opportunity is sought to effect an improvement in the sanitary condition; in particular a very large number of lavatories have been so reconstructed as to afford a larger measure of privacy, and details of this kind frequently involve a great deal of work with very little to show for it.

The entire elimination of unsatisfactory conditions is a work of time, but it is a matter of much satisfaction to note the number of new and well-built factories now springing up. Speaking generally, the most unsatisfactory premises are those situated in the heart of the city, solidly built long ago, and prevented by their position from being properly lighted and ventilated in the middle of the building; they stand on valuable property, carry a high rent, and are sought after because of their convenient position near the warehouses and centre of trade.

I would once again express my opinion that provision should be made in a Building Act to compel the introduction of inset light and ventilation areas in buildings adjoining one another. The small loss of space in the building would be more than atoned for by the improvement in the rooms.

I visited the three large jam factories in my district during the school holidays, and found that the old custom of employing children of school-going age on fruit-picking had almost come to an end, and that the boys and girls who used to be found there had been to a great extent replaced by elderly women. By the middle of January only two schoolboys were to be found, and they were returning to school on the opening day. It is not necessary to remark that the permit issued by the Department to employ school-children during the school holidays without the usual certificate of fitness applies only to those children who have passed their thirteenth birthday.

During the early part of the year jam factories and laundries are specially busy, but dressmakers' rooms are more or less empty until the Easter trade and autumn season give an impetus to their special activities.

My work since the beginning of the year has been largely that of routine, necessary and useful, but affording very little scope for report.

Inspector Miss Harriott reports :—

An unsatisfactory feature of my work during the past year is the fact that I was unable to visit every factory in the district under my charge. During the greater part of 1914 the women's side of the work was carried out by two women Inspectors, so that an inspection of each factory employing women in the metropolitan area was obviously impossible.

The usual number of complaints were investigated, and these always take up a great deal of time. Some of them—generally the most bitter ones—on inquiry turned out to be

be of a most trivial nature; for instance, complaints coming from two suburbs in regard to the water supply in factories proved to be nothing more than a temporary shortage caused by repairs being made to the water mains—an inconvenience quite unavoidable and remedied before my visits. Other complaints were fully justified, and in some cases led to prosecutions. A serious complaint was one made in reference to boys working at hand bronzing in a printing factory. Two lads under 16 years of age were employed for the whole day at this work. At the time of my visit the boys were engaged in dusting off the loose bronze powder from the sized paper by means of feather dusters. They apparently thought the work rather good fun and their actions were so vigorous that the air of the room was full of the powder, while they themselves were covered in it from head to foot. This had been going on for some weeks. Milk was provided, but as it stood in an uncovered vessel in the room it probably constituted a source of danger in itself. The Printers' Award wisely allows females only to work at the dangerous process of hand bronzing for two hours at a time, and it is surely an oversight that the restriction has not been extended to meet a case like this. It must, however, be allowed that the work of hand bronzing is fast disappearing, and improved machines, which give off very little dust, are being more generally used. On my representation the boys were put off this work, and the employer has since arranged for any similar work to be done by machines outside his factory.

The problem of maintaining cleanly conditions in the surroundings of factories situated in chambers where all tenants do not come under the jurisdiction of the Factories Act is always a difficult one. Although it is an injustice to make the occupier of a small factory responsible for the re-colouring of stairs and passage-ways common to all tenants, yet the state of a city building of this character was found to be so bad that notices were served on the occupiers of factories in it requiring them to have walls of passage-ways leading to their rooms cleaned and re-coloured. This caused no small amount of grumbling at the time, but through the pressure brought to bear on him by the tenant, the landlord did the work, to the great benefit of all concerned. All attempts to make him do the work had previously been in vain.

Ventilation.—A workroom situated in a semi-basement in the heart of the city was after some difficulty greatly improved by means of ventilating shafts. In another case the ventilation of workrooms connected with a printing establishment was found to have become very bad through the blocking up of windows by a new building, which had been put up at the rear of the factory. This case illustrates the need of constant inspection, as on former visits the ventilation of the factory was quite up to the required standard.

The occupier proposed to pay half the cost of putting in new windows, but as the owner refused to bear any share of the expense, matters were at a standstill, and the workers were suffering both from want of light and air during a very hot, trying month. Through the action of the Department the owner put in the windows at his own cost.

Violent anonymous complaints were received in regard to the ventilation of a large millinery workroom. On investigation the matter was found a difficult one to deal with. The room was without doubt a trying one to work in during the hot months, but readings of the wet and dry bulb thermometer were taken on several occasions, and the conditions were found just about to conform with the requirements of the Act. The owners were reluctant to make any changes, as the position of the room suited the business. Their opposition to any suggested improvements was caused principally by the threatening and exaggerated letters of complaint which they had received, and which evidently came from the same source as those which were sent to the Department. In the end I succeeded in getting an alteration made by which three large windows were added to the workroom.

Police Court proceedings were found necessary in several cases. Flagrant breaches in regard to overtime were committed in one clothing factory, whose owner was quite conversant with the Act. The girls were made to work past 6 p.m. without being given an interval for a meal, and no tea money was paid. In three other factories I found that tea money had not been given for work after 6 p.m. Fines were inflicted in all instances.

A printing firm, doing work for several commercial newspapers, had a difficulty in making the hours of its women workers conform to the requirements of the Act. The girls were employed regularly after 6 p.m., but worked short hours during the day. The bulk of the work, it was claimed, could only be done at night; however, after a prosecution it was found that arrangements could be made with the papers to allow of the women's work being done during prescribed hours.

Another firm was found to have worked its women employees for seven hours on a Sunday. The employer contended that the work was not overtime, as the women had worked altogether only thirty-two hours during the week in question. It was, however, proved to him in Court that he is bound to regard any time worked beyond the usual hours shown in his time-sheet as overtime.

In other cases employees were fined for not recording and not notifying overtime to the Department within forty-eight hours of the time worked, and for not keeping time and wages sheets in accordance with the Regulations of the Industrial Arbitration Act. The latter breach I am sure would not be nearly so common and much bitter feeling would be prevented if the necessity for keeping these records were clearly set out at the beginning of each Award. A man setting up a small business gets a copy of the Award he is working under, and thinks that if he carries out its provisions he is doing all that is required of him.

him. I have constantly heard it said in reference by an explanation about the keeping of these records: "But that is not in the Award." He may know nothing about the Regulations of the Act. This especially applies to small employers in the country.

The difficulty of the question of forcing employers to provide dining rooms for the use of women was brought home to me in the case of a large woollen mill. The company was ordered to provide a suitable room for meals. One was built at the cost of several hundred pounds, but it was found that the majority of the women preferred to sit about the mill or the grounds in groups and rarely used the dining room. I made inquiries as to the cause of this, and found that the rougher element among the girls made things unpleasant for the quieter women. Among a large number of all ages in a common room this is apt to be the case, and unless there is some sort of supervision exercised the dinner hour can be made anything but a peaceful one.

In another factory where several hundred women are employed the dining room just after a meal hour was found in a disgraceful condition, tea and food emptied on to the floor, and the place a scene of confusion. The attendant engaged by the firm was powerless to control the girls. A piano which had been provided by the employers as the first of a series of improvements was broken and the inside filled with scraps of food and fruit parings. The elder women were disgusted, and had their meals about the factory.

In my experience a dining room connected with a factory where large numbers of girls are employed, unless under proper control, is not an unmixed blessing. In smaller factories the supervision is not so difficult.

What can be done with money and organisation can be seen in the Tobacco Company's factories, where the girls sit down at tables covered with white cloths to an excellent three-course hot dinner, which is provided at the small cost of 2s. per week. At the company's new factory at Kensington a large cottage, in bungalow style, has been built for dining rooms. The wide verandahs are fitted with lounge chairs, and palms and pot plants are placed about them. The grounds are being laid out in lawns, and tennis courts are being formed for the use of the employees. Apart from the physical good to the girls, the moral benefit of a well-organised lunch hour cannot, I think, be over-estimated.

The outbreak of war in August affected the women's work variously. In those factories where military contracts were executed a great amount of overtime was done, work being found necessary even on some Sundays. The strain of the extra hours was borne cheerfully by the women in a spirit of true patriotism. Also it must be said that amidst the general uncertainty and fear of unemployment the work was welcomed on account of the extra money thus earned. I was told more than once that it proved a blessing in families where the menfolk were on half pay. Women were particularly busy in the factories making soldiers' uniforms, hosiery, shirts, felt hats, tents and tarpaulins, bedding; also in woollen mills and meat canning works.

The efforts that were made to prevent overtime by dividing the work among those out of employment were not altogether successful, as only skilled hands are valuable at a rush time, and in many of the trades requiring them these were not available. Again the manufacturers are limited as to numbers employed by space and number of machines, and the Military Authorities were urgent in their demands for haste and an increased output.

In other industries the immediate effect of the situation was to cause some amount of unemployment or, more generally, part time employment.

This was especially so in the printing and other allied trades, which, owing to a scarcity of paper and decrease in trade, went through an anxious time.

But on the whole the unemployment among women was not anything like what was feared, and towards the end of the year a fair amount of overtime was done, apart from military work. Dressmakers and milliners, though not as busy as usual during the race season, still did better than was expected. The larger, more expensive, class of establishment appeared to suffer most, for their clients saved in the number of dresses ordered for the season, and in many cases gave their work to more inexpensive makers, and as the latter cater generally for the woman who gets a new dress as a necessity, not as a luxury, they were not adversely affected. Straw hat factories and factories making leather goods, such as ladies' hand-bags, purses and suit-cases, were particularly busy owing to the stoppage of imported goods.

Inspector Miss Golding reports:—

Although appointed as a factory inspector in November, 1913, I was unable to take up those duties until February, 1914. This was owing to the fact that three early closing inspectors (women) had been appointed, and I had to devote a certain time in initiating them into their duties.

During 1914 I did not make the number of factory inspections I wished, as some time was spent in Goulburn, Queanbeyan, and Yass, inspecting under the Industrial and Early Closing Acts, the result of these inspections being two and three extra trips to each place to prosecute under both Acts.

Dressmaking.—A fair amount of time was spent in inspecting dressmaking workrooms. A very low rate of wage prevails, owing to the fact that no award governs this class of employment.

In many of the small workrooms better rates are paid to the girls than those paid by the fashionable costumiers, or large firms, that is, leaving forewomen out of the question.

In

In one of the principal streets I found a Chinaman carrying on this industry. He had six employees, and had occupied the same premises for over three years and had never registered his factory.

He had never notified or kept a record of overtime and had never paid the forewoman overtime rates.

I recommended prosecution for breach of section 7. He was fined 20s. and 6s. costs; section 43, 10s. and costs. On the payment of all back money due to the forewoman that case was withdrawn. Action was taken in a similar case in the same street with the same result.

The back money in both cases amounted to considerable sums.

In a number of large establishments since the inception of this Act, the forewoman and assistant forewoman had never been paid overtime.

The excuse given was they were not docked for holidays, &c. Action was taken in quite a number of these cases. The magistrate did not view this breach lightly, as fines from 20s. to 40s., with costs, were imposed.

In most of the cases back money was paid after the breach was discovered. In some instances it amounted to £10 paid by the one firm.

In many places the lavatory accommodation is not all that can be desired. In one large firm I found in the door of each W.C. two large holes, which left no privacy for the occupant. I spoke so strongly on these conditions that within forty-eight hours they were boarded up.

Great carelessness exists in recording and notifying overtime worked. In a suburban factory where fourteen girls were employed, work had been performed on Saturday (this was a five-day workroom), about nine hours overtime. The girls were not paid overtime rates, and had exceeded the three hours allowed by law. It was not notified and was not recorded. The wage paid ranged from 4s. up to 22s. 6d. (One girl received 22s. 6d.

Action was taken in these and many similar cases, fines from 10s. up to 20s. with costs were the result.

Conditions will not be satisfactory until this trade is governed by an award. I would urge on those who will be appointed to the Board to insist on a living wage, and that an apprentice be not paid less than 10s. per week.

Tailoring.—During the year these factories needed special attention in view of the fact that a number of them had military contracts. Whilst inspecting under the Factories Act, I also made inspection under the various awards (six) applying to the trade, so can state that 90 per cent. of my industrial prosecutions are the outcome of my factory inspections, and that 90 per cent. of back money paid during the year was almost in every instance due to factory inspection—that is, in my own case.

One inspection can be very easily carried out in conjunction with the other.

In several city factories sanitary accommodation was bad.

In one factory I found two W.C.'s and one washbasin for about sixty girls. In another, one W.C. for about thirty-two girls. In each case action was taken. Fines of 20s., 40s., and 50s. were the result.

In another city factory the mill-gearing of the motor was quite unfenced, and several boys and girls were employed without certificates. Action was taken, and fines imposed in every instance.

It requires constant care to see that the work rooms are kept clean. In one factory, where over seventy-five persons were employed, I found the floor crusted with dirt under the benches, old boots, bottles, boards, &c., and eighteen bags of rubbish. This case was taken to Court and was bitterly defended. However, the magistrate convicted, and imposed a fine of £5 and costs. At the same visit I discovered four breaches of the various awards applying to the trade, not paying award rates, &c.

Owing to the military contracts, during the latter part of the year, very excessive overtime was worked in many factories. Employees worked from Monday morning till Sunday night, each night till 9 and 10 p.m.

On account of the urgency of the work action was not taken for the excessive overtime, only in cases where it was not recorded, and the Department was not notified. Fines for these breaches were imposed, ranging from 20s. to 60s. with costs.

After the outbreak of the war for a short period a slackness occurred in many factories, but now conditions are again fairly normal.

Hats and Caps.—Owing to military contracts the felt hat factories have been very busy—that is, those which were fortunate enough to get the contracts.

A great amount of overtime was worked, the excuse given was scarcity of skilled workers.

As this excuse is always given, and as every year a certain number of Government contracts are given out, it seems a short-sighted policy on the part of manufacturers not to train their female employees in all branches of the work. Also those who employ straw hat makers, as when there is a rush of trade in the felt hat line there is a slackness in straw hats.

It has been stated that straw hat workers could not trim felt hats and *vice versâ*.

One manufacturer informed me a smart girl could learn to trim either in a week or so.

A forewoman in another factory, who is an expert in both lines, said, "You might as well say a milliner could not trim a velvet hat if she had been trimming straw ones."

If girls were taught both lines there would be no need for excessive overtime, and an effort should be made in this direction.

The third kind of hat factory turns out what is termed ready-to-wear hats. These are made of velvet, silk, linen, and other materials. In these places work has been brisk. It is light and suitable work for girls. The rate of pay is much higher than that paid in fashionable millinery establishments.

In other clothing factories, which include underclothing, blouse-making, lace ties, and all white work, the principal cause for complaint is the low rate of pay. The employees are protected as far as the Factories Act extends, but as this Act does not deal with wages, the wretched minimum rates still prevail. Organisation is the only means that will solve this problem.

Laundries.—Constant supervision is required over these places, as at certain times of the year overtime is worked, and although these employees have been protected by an award (which expired during the year), in several places visited by me I found overtime had not been paid. In one large laundry excessive overtime was worked, the three hours and the thirty times overtime allowed by the Act had been exceeded, and in no instance had the overtime been notified to the Department. The lavatories were in a disgraceful condition, and the machinery most unsatisfactorily guarded. I recommended prosecution for dirty premises. A fine of 60s. with costs was imposed, and fines of 10s. and 20s. with costs in the other cases, section 43. Action was not taken *re* the machinery. Later in the year a young girl had her hand crushed in the steam calender. Action was then taken and a fine of 40s. was the result. When making the factory inspection at this factory, I also inspected under the Laundry Award and the Laundry Carters' Award, and found many breaches under both. Three carters were not being paid award rates. This inspection led to prosecutions in the Industrial Court.

In another laundry, as much as £6 5s. back money had to be paid to one person. In several small ones amounts from 20s. up had to be paid for overtime worked.

In another large laundry, the manager discharged an employee without notice because she was absent on the Saturday morning through illness. He refused to pay her the week's wage in lieu of notice.

The case was taken to court, and he was fined £5. Costs and witnesses' expenses ran into £4 17s. 6d. In several other laundries excessive overtime was worked, and no notification was sent to the Department. In these cases also action was taken.

In a laundry in one of the suburbs I found two boys, aged 14 years, employed on a steam calender without a certificate. The Department prosecuted in both cases; convictions were gained. The large laundry proprietors are the greater offenders. In many instances the blame is put on the managers. However, the fact remains that more breaches of both Acts occur in these than in small laundries.

The work is heavy and very trying, particularly in the summer months, so it is to be hoped when a new award comes into force an adequate rate of pay will be fixed.

Leather Trades.—A large number of females are employed in boot and saddlery factories. As these trades are governed by awards, conditions are greatly improved. Of course, the scale of wage is not as high as one could wish.

The war has not caused a depression in these trades. The saddlery factories in some instances were kept very busy, and excessive overtime was worked owing to military contracts. In other places, where the proprietor was not fortunate enough to get Government contracts, for a time trade was slack, but not to the extent felt in other lines.

In one city factory, where a number of women were employed, excessive overtime was worked, the thirty times allowed by law was exceeded. On inspecting the factory (saddlery) I discovered the girls had never been paid at time and a half for overtime, and had not been paid tea-money, although this Act is so many years in existence. However, over £10 back-money was paid. Action was taken for the various breaches and fines imposed.

In another city factory the number of female employees was twenty-six. Only one W.C. was provided, and it was in the workroom. To this I took exception, with the result a second one was provided, and this time away from the workroom.

This line of trade is more suitable for boys and men; the work is very hard on the hands. Most of the girls suffer very much with corns on their fingers. If female labour is employed, the rate should be equal pay for work of equal merit, but whilst there is such a disparity between the wage for male and female workers women will always be employed.

One manufacturer told me the work performed by the women was most satisfactory, but he lost sight of the fact that he had not given one penny over award rates, although the work was so very good.

Printing Factories.—Here again, when inspecting under the Factories Act, Industrial inspections can be dovetailed. As six awards apply to this trade, the inspector has a good field for labour; in fact, the whole of the year could well be devoted to this work alone.

The lack of suitable accommodation for female workers in most of these places strikes the inspector as soon as she enters the factory. Also the conditions *re* cleanliness of the floors and lavatories. Of course, there are exceptions where the care of the women workers is of great consideration.

In many places no dining or dressing-rooms are provided (*re* these matters I will say more later on). In one place I had to visit *re* excessive overtime, twenty-five girls

were

were employed. At certain times during the year they had to work on Sundays. No dining-room was provided, no mattings on the floor (which appeared rather damp), and hardly a seat in the whole of the factory. On going into these matters with the members of the firm, they said, "We have never been approached on these conditions." The result of this interview was the providing of a dining-room upstairs, with table, seats, a gas-ring, sink, &c. Downstairs, seats and matting for the floor. This firm is over fifty years established, yet up till now had never thought of its women workers.

This Act allows 48 hours per week, the Award (Female Printers) allowed 45 up to May, 1913, when they were reduced to 44½ per week, yet in seven out of ten factories they work 45, and in no case did I find the extra half hour paid as overtime.

In each instance, on drawing the attention of employers to this breach, six month's back money was paid; in some factories amounting to £6 and over. The variation of the award allowing the luncheon interval at 11 a.m. is more honoured in the breach than in the observance, as it is not long enough for girls to get refreshments, and, as in most places girls are employed to feed machines, the men would be idle. Where the girls in one factory took the time off, one would find in four they did not. However, when the new Female Printers' Award came in this concession was left out.

In the centre of the city I found a man occupying unregistered premises, not fit for occupation. He had used them for over three years. The girls had worked overtime for which they were not paid. No record was kept, and, of course, the Department had not been notified. As well as these breaches, there were several under the Industrial Act. Action being taken in several breaches, fines of 50s. and less were imposed. All back money paid to the girls. Registration was refused. He now occupies premises in another part of the city—and is carrying out the law.

Another great cause for complaint is the unsatisfactory guarding of the machinery, in many instances not guarding at all. In these factories quite a number of young boys and girls are employed, and very often without certificates. I have recommended prosecution in many cases for this breach, also for breach of section 33, as I consider it is the duty of an inspector to give special attention to these important matters.

There is a great tendency to overlook section 20 in these places. Here also prosecution has had the desired effect.

It is astonishing the careless way in which the provisions of the various awards are regarded, not keeping correct records, not posting copies of awards, and not paying award rates. The secretary of the Master Printers' Association in more than one issue of their monthly paper has drawn their attention to these matters, also to sections of the Factory Act.

Canister Factories.—The work in these factories is trying and nerve-wracking, and, in my opinion, is not suitable for females. In some of these places they can be found working crimping, body-making, and capping machines. I would strongly urge this is the work for youths, and I would like to see these machines added to the list on Abstract II, as they must in time have an injurious effect on the system.

Early in the year in one factory, where a number of girls and youths were employed, most of the machinery was unguarded, and the workroom was very congested. Action was taken under section 33, and a fine of 40s. with costs inflicted.

Alterations were made in the premises, and portion of the machinery removed to another part of the factory, which made conditions better.

On visiting another city factory, a workman was operating a power-press without a guard. The excuse was it had been broken a week previous. When the case was taken to court, the manager told the magistrate the operator had taken the guard off. I put the true facts before the magistrate, and this firm was fined 40s. In a suburban factory, similar conditions prevailed, the result of which was a boy lost the tops of both thumbs. This employer had been prosecuted several times for breach of section 33.

In another suburban factory ten females were employed, the only convenience provided for them was the lavatory. There were about five hooks in it where they hung hats, coats, &c. On drawing the proprietor's attention to these conditions he at once provided a dressing-room.

Broom and Brush Factory.—On visiting one of these in my district, I was informed it was in existence for six years, yet at no time had the common sanitary arrangements been provided for the female workers. The conditions for male employees were almost as unsatisfactory; and no effort made to guard the machinery, although a male inspector had given full instructions six weeks previous to my visit. On my recommendation, action was taken for the following breaches :—

Regulation 15, fined £10 and 6s. costs; Regulation 16, fined 20s., 6s. costs; Regulation 17, 20s., 6s. costs; section 33, 40s. and 7s. costs; for employing a girl without a certificate, 10s. and 7s. costs.

The magistrate commented strongly on the above conditions.

When inspecting a die-sinking factory, I found a girl working an unguarded power-press; in fact, most of the machinery was unguarded. The female employees had worked excessive overtime, and had not been paid tea-money. The Department had not been notified of any of the overtime worked. This inspection disclosed quite a number of breaches. Four prosecutions were taken. Section 33, 50s. and 6s. costs; in the other three, fines from 20s. to 40s. with costs were imposed. After the prosecution the tea-money was paid.

Space will not permit of me to deal with every class of factory which comes under my supervision, but before concluding I would like to say in many of the city and suburban factories

factories the cleanliness of the factory appears to be regarded as a mere detail. It is in many instances left to the messenger boy or boys, or the useful man. The excuse is often made, cleaners cannot be obtained. This statement is not correct, as cleaners are now an organised body, and can always be engaged by applying to the Secretary of their Union. The trouble is there is a disinclination to pay award rates.

Another matter for regret is the lack of dining and dressing rooms in many factories and workrooms, both for men and women. When the Act is amended, I would like to see the sections 24 and 27 made imperative, as differences of opinion might arise, and it should not be left to chance. I would also suggest that the words, "Male employees" be added. No idea can be conceived by a lay person of the pressing need for dressing-rooms for both sexes. To prove this, it is only necessary to visit various factories where noxious trades are carried on.

The lunch hour is a break in the day's labour, not only for refreshment, but a cessation of work, so every facility should be given for the full benefit of the same.

INSPECTOR PICKERING reports:—

On the whole, I find that the factories are well maintained, and there appears to be a strong endeavour on the part of factory-owners to comply with the Act. Trade has been exceptionally good, and factories were kept busy until the European crisis in August brought about a slump in certain trades. Of these, the one which proportionately seemed to suffer most, was the furniture trade.

Sanitation and Ventilation.—The improvement which is taking place in this respect is due, no doubt, to the old factories being renovated or demolished and new premises built. The architect now does not lose sight of the fact that good sanitary conditions are essential, and to save trouble the plans in most cases are submitted to the Department for approval. It is found more profitable to do this than to make alterations afterwards. The provision of dining and dressing rooms is a great improvement, and must add to the comfort of employees. These are particularly necessary where foodstuffs are being prepared. A great difficulty is sometimes experienced in obtaining the proper amount of ventilation, as it interferes with the process of manufacture of certain goods. One instance of this kind, which I was called upon to investigate, concerned a large tobacco factory in the suburbs. This was overcome by adding more eduction pipes in the rooms and also using exhaust fans where necessary. A difficult proposition which we have to deal with is the cleansing of the floors. There appears to be great neglect on the part of the owners or foremen to see that these are frequently swept. This is made more difficult on account of the necessity of doing it before or after working hours.

Guarding of Machinery.—This very important part of the Act has had, as usual, my careful attention. There are still dangerous machines to be dealt with, necessitating the designing of what may be considered more suitable guards. In mentioning this, I have in mind the circular saw, jointer, and shaper in wood-working machines, and the tin power-press. The Department has approved of several saw-guards, each of which can be used for its particular class of work, such as "ripping" or "cross-cutting," or for both. The circular cutter-head of the jointer seems to find favour with operators, as they realise that the danger of losing fingers is greatly minimised. The guarding of the shaper is still a difficult problem, on account of the varied class of work done on this machine, which necessitates so much changing. A simple adjustable guard, of American design, which has lately been put on the market, is likely to become popular. The guarding of the power-press has had a good portion of my attention, but some employers have to be continually under supervision in regard to maintaining the guards, and, it seems that prosecution is the only remedy. I find that the best method of guarding the ordinary power-press is to provide a guard for each die, which need never be removed even when changing the die.

Accidents.—One fatal accident happened in my district. This was caused by the splitting of an emery stone. The investigation of this matter was carried out by Senior Inspector Hastie during my absence from duty. Another accident occurred at a large joinery works in the city. An employee was operating a 5-inch tenoning machine, and at the time was wearing a loose calico apron. He had occasion to walk round to the end of the sliding table to alter his gauge, when his apron was caught up by the cutter-heads of the machine and wound round the spindle. By this means he was drawn on to the guard which covered the cutters, but the bracket not being strong enough to withstand the strain, broke off, thus allowing his body to come into contact with the knives. He was badly lacerated down the left side and arm. I may mention that he was 74 years of age and had been in the firm's employ for over 40 years. This is one instance in which the Inspector ought to have control over the dress that is worn in certain factories. I would suggest that a regulation be inserted to prevent machinists from wearing loose aprons. The dungaree half-overall is much more preferable and safer, as it fits tightly round the body.

The following fatal accidents occurred in my district also, and, although they do not come under the Act, I feel that I could not allow them to pass unmentioned. The premises were used for the manufacture of chlorate of potash, a compound used for explosive purposes, but in itself not explosive until further compounded with other

ingredients. It is highly inflammable when held in suspension, and has a tendency to ignite when subjected to friction and concussion. A boy was employed as a "rammer" on one of three machines, filling this powder into small calico bags. From some cause unknown the boy's clothes became ignited, and before assistance could be rendered he was so severely burnt that he died. The coroner, at the inquest, recommended that certain suggestions to prevent further accidents should be brought under the notice of the Department. These suggestions were forwarded to the Company, and all except one were carried out. The one omitted was that employees should wear overalls without pockets, and made of such material and in such a way as to minimise the danger of dust suspension. On several occasions I have seen employees wearing knitted guernseys, which very quickly became impregnated with dust, and therefore very dangerous. Four months afterwards an accident happened at the same factory, but with more dreadful results. In this case three boys were having lunch in the paddock adjoining the factory and about 30 yards from the main building. One of them lit a cigarette, and allowed a spark to come in contact with his clothes. In a very short time the clothes of the three boys were in flames. They were so severely burnt that death resulted in each case. There is very little doubt that if the suggestion of clothing had been put into force after the first accident, the second accident might not have occurred. There seems to be a lack of legislation dealing with this class of factory, and the introduction of certain regulations would be beneficial.

Prosecutions.—Several prosecutions resulted during the year, the most noteworthy cases were on account of not maintaining the guards on tin power-presses. Four firms were convicted, and as one of them was an old offender, the maximum penalty was imposed. I had also a rather peculiar case in regard to a furniture factory. It was reported to me that work was being carried on after the ordinary working hours. I visited the premises on Saturday afternoon and found the occupier working at an overmantel. He said that he was not registered as a factory, and could work any hours he wished. About a month previously I had advised him as to what constituted a factory, *re* installing of motive-power, &c. In the meantime he had installed a motor to drive a band-saw. He was convicted of having worked after hours, and also of failing to register his premises. Another prosecution was against a firm of glass manufacturers for employing boys under 16 years of age in a prohibited part of the factory. A conviction followed.

Chinese Factories.—I paid several visits to Chinese factories in my district, and found that the proper hours were being worked and, on the whole, the factory conditions were being well maintained.

Fire-escapes.—There has been a number of fire-escapes erected and passed by the officers of the Fire Brigade. A great drawback has been the failure to obtain wired-glass, to be used in the windows adjacent to the escape. As the glass has to be imported under the conditions which exist at the present time, some escapes have had to be hung up in consequence.

INSPECTOR JACKSON reports:—

During the first three months of 1914, I was absent from official duties, on extended leave, consequently I have only nine months work to report upon.

While absent, the electorate of Allowrie was added to the factory districts; and after visiting Wollongong and district, I made an inspection of the factories in Allowrie. The inspection of these districts occupied about twenty-one days and the number of factories visited was 136. Approximately, 65 miles were travelled by motor car, 118 miles by sulky, 35 miles by buggy, and 20 miles by coach, in addition to the distance travelled by rail.

After the careful instructions previously given by Senior Inspector Burkitt, I found that many of the factories had conformed with the requirements of the Act, but with some it was necessary to give fresh instructions for guarding machinery, and for registrations of premises.

I found it necessary to prosecute in only one case, that of a baker in occupation of dirty premises. For this breach of the Act, the occupier was convicted and fined. Many saw-mills were visited in this district, and although the war had only just started, I found that it was adversely affecting the output.

In the area under my supervision, about 1,000 visits have been made to factories besides the work involved in prosecutions at the various police courts. The majority of prosecutions have been taken for breaches of the Act in employing boys under 16 years of age, without having obtained medical certificates of fitness, and in every case the employer was fined. In the majority of these cases the employers knew the law, but neglected to do their duty in the matter.

In my factory district many new and up-to-date factories have been and are being erected, the increase being most noticeable in Alexandria and Waterloo, and these municipalities will doubtless become more and more the centres of industrial activities, being, as they are, in close proximity to the city, and handy to the railway.

A new industry has been started in Alexandria, viz.—the manufacture of crystal glass for table purposes. Hitherto the manufacture of bottles has been the only industry in the glass manufacturing.

In Alexandria the industries of glue-making, fertilisers, soap, and tallow-making play an important part. In connection with these industries, the smells arising are not particularly

particularly pleasant, but they do not seem to be detrimental to health, as the employees are seldom ill, nevertheless, the health authorities endeavour to minimise this nuisance as far as possible, and one firm has been prosecuted and fined for allowing foul gases to escape through defective fittings.

The sanitary arrangements in many of the factories show decided improvement, where connection with the sewerage system has become possible, and when the large sewer is complete from Botany to the sea, many more will be connected. It will probably be about two years before this is completed, and in the meantime the pan system prevails in many factories, and this is always objectionable where a large number of hands are employed.

The matter of fire-escapes where necessary has not been neglected; but as there are few factories in my district more than two stories high, attention to these matters has not taken up much of my time.

Many orders have been given during the year for guarding circular saws with the new and improved saw guards. Users do not always take kindly to their use at first, but generally appreciate their utility, after they have been in use a little while. Many employees are very conservative with regard to the use of guards, especially on wood-working machinery, and will often leave off guards and work the machines without them contrary to the instructions given by the employer. Speaking generally, I have found employers very willing to provide guards when instructed to do so by the inspector and to take his advice on all matters relating to the requirements of the Act.

I regret to have to record one fatal accident which occurred at a brick factory in the Wollongong district. The man to whom the accident happened was assisting a fellow-employee to place a conveyor-belt on a pulley, by putting on a horizontal belt which was conveying crushed clay over a series of rollers or jockey pulleys. Instead of standing on the floor and pulling on the under side of the belt, he jumped up on the frame on which the rollers and belt were running; he lost his balance and fell on to the conveyor-belt, which carried him along till he met a vertical belt, which dragged him down on to the main shafting from which he dropped on to the floor. He died from internal injuries the next day. The belt was well guarded by the wooden frame upon which it was running. A verdict of " Accidental death " was returned at the inquest.

Another accident happened to a woman, in a steam laundry, at a steam-heated callender. There was a good guard provided at this machine. The machine had been stopped to allow a curtain to be placed in position, which curtain had followed round one of the rollers instead of coming out on to the delivery board. A boy was assisting at one end of the machine and the woman at the other end, and as soon as the boy had removed his end of the curtain, he started the machine before the woman had her hand clear of the rollers and her hand was badly crushed and burnt.

Many of the accidents reported to the Department might have been avoided by the exercise of care in working the machinery.

Inspector Wallace reports :—

On the 7th August, 1914, I took over portion of Inspector Hastie's factory district. During the greater part of the remainder of year, I was principally engaged on Industrial Arbitration and other work in the Metropolitan and country areas, in consequence of which I was afforded very little opportunity of completing the factory inspections in the area allocated. I found most of the factories visited in a fairly satisfactory condition. The occupiers showing a willingness to carry out the instructions given.

The work of inspecting would be greatly facilitated if a uniform system of guarding machinery, where practicable, could be adopted to prevent the inferior and weak class of guard being fitted to machinery. I would suggest that " plates " showing the various approved guards be made procurable at the Government Printing Office or the factory Department, also stating where guards are procurable, which would effect a great saving of time as regards directions.

The extension of the Factory Act to the other parts of the State is urgently needed. I have had the opportunity of observing the neglect in safe-guarding machinery in the country areas visited.

Inspector Dunleavy reports :—

Owing to the small factory area that I had under my control during the year, I had ample opportunity to make a number of successive visits to various factories. During those visits, I noticed that the more rigid the inspection, the more anxious the occupiers are to conform with the requirements of the Act and regulations, and only in isolated instances were they inclined to be antagonistic to the Inspector's proposals.

What, to my mind, is very noticeable, is the fact that occupiers depend too much on the advice of the Inspectors in regard to matters which are distinctly provided for in the Act. Whether that has been brought about by the existence of a paternal administration or not, I do not know, but it exists, and it is very noticeable in regard to section 33 of the Act *re* the fencing of fly-wheels, cog-wheels, and mill-gearing. I have given a number

number of occupiers notice to securely fence all dangerous machinery and, even though I have given specific instructions, I have had to take action against some occupiers for carelessly disregarding my instructions, which was apparent on my second visit.

During the year I had occasion to prosecute the occupier of a factory for not keeping his premises in a cleanly condition. He appeared at the Court and pleaded "Not guilty," but was convicted.

Section 6 of the Act provides that "Every person in occupation of, or about to occupy, any premises which it is intended to use as a factory for the first time, or which, after a period of disuse, it is intended to again use as a factory, shall, not less than seven days before it is so used or again used as a factory, forward to the Inspector of the district, or such other person as the Governor may appoint, a written notice containing such particulars as may be prescribed. The Inspector, etc., etc."

Section 7 provides that any person in occupation of an unregistered factory, under certain conditions, shall be liable to a penalty of £10. No provision appears to be made where a factory has never been out of use, although the ownership has been completely changed. I would suggest that the Act be amended to apply to such a case. I also came across one or two unregistered factories, the owners of which denied any knowledge of their obligation to register.

INSPECTOR DURACK reports:—

I have the honour to state that although I was gazetted as an Inspector under the Act on the 13th November, 1912, I did not make any factory inspections, other than a few which I made upon my own responsibility, until towards the end of the year 1914. I feel, therefore, that the limited experience which I have had in connection with factory inspection, does not enable me to express an opinion, either one way or the other, as to the operation of Part II of the Act.

INSPECTOR THYER reports:—

This, my first report under section 19 of the Factories and Shops Act, 1912, is necessarily, in view of the fact that I have been—during 1914—engaged primarily upon work which involved the review of monthly records of the statistics of the Department, confined chiefly to a review of the operations of the Act as disclosed by those records.

Factory Districts.—By proclamation of 1st January, 1914, the following Factory districts were extended:—

1. Metropolitan district (to include electorate of Allowrie).
2. Newcastle district.
3. Western district (to include electorates of Lyndhurst and Mudgee).
4. Goulburn district.
5. Albury district (to include electorate of Wagga).

The number of factories registered at the 31st December, 1914, was 6,069 as compared with 5,561 at 31st December, 1913.

By direction of the Minister for Labour and Industry, the customary annual returns of employers made under the Act were furnished one month earlier than was usual. The returns showed that there were employed in factories on 31st September, 1914, 89,986 persons, being a decrease of 5,598 upon the number of persons employed in factories at the 30th October, 1913. The returns of September, 1914, were collected at a time when employment in factories was adversely affected. The declaration of war by Great Britain, an increase in oversea freights, uncertainty of supplies, and a contraction in the money market influenced employers to restrict their operations, and in many instances to reduce their staffs.

In May, 1915, the Minister directed that a summary of the record of employees in every registered factory should be furnished to the Chief Inspector of Factories on or before the 8th May, 1915, the figures given to include all persons employed in the factory during the week ending 30th April, 1915.

These returns showed that on the 30th April, the number employed in factories had increased to 93,143 as against 89,986 employed on 30th September, 1914. The returns have been made the subject of a commentary published in the June issue of the *Industrial Gazette*, 1915.

Considerable light may be thrown upon the operations of Part II of the Factories and Shops Act by a review of the number of cases in which the Minister has authorised prosecution. A bare numerical record of cases, however, cannot be a gauge of the effectiveness of the Act in operation, as prosecutions can necessarily be taken only against such employers as have been negligent or careless of the obligations imposed on them by the Act. Of 6,091 factories registered in all districts at the end of 1914, the appended prosecutions were taken in respect of 113 employers, and it is evident that the majority of owners or occupiers show reasonable and willing compliance with the Act.

The

The following table summarises for the year 1914, the monthly record of cases in which proceedings for penalties were taken under Part II of the Factories and Shops Act, 1912 :—

	Section.	Cases.	Convictions.	Penalties.	Costs.	Average penalty.
				£ s. d.	£ s. d.	£ s. d.
In occupation of unregistered factory	7	6	6	5 5 0	1 17 0	0 17 6
Obstructing an Inspector	11	2	2	10 0 0	0 12 0	5 0 0
Failure to keep records as prescribed	14	1	1	0 10 0	0 6 0	0 10 0
Failure to keep factory in a cleanly state	20	9	8	15 0 0	2 11 0	1 17 6
Failure to fence dangerous machinery	33	32	31	80 0 0	9 19 0	2 11 7
Failure to notify accident	38	5	4	4 10 0	1 9 0	1 2 6
Failure to provide means of escape from fire	39	1	1	3 0 0	0 6 0	3 0 0
Employing children without special permission of Minister.	40	3	2	1 0 0	0 14 0	0 10 0
Employing persons in prohibited factory or on dangerous machines.	41	5	5	8 0 0	1 12 0	1 12 0
Working more than five hours without interval for meals.	42	2	2	1 6 0	0 14 0	0 18 0
Overtime	43	56	55	39 10 0	18 8 0	0 14 4
Employing persons under 16 in restricted part of factory.	44	1	1	1 0 0	0 7 0	1 0 0
Employing persons under 16 without certificate of fitness.	45	22	21	18 9 0	7 8 0	0 17 7
Working during prohibited hours in furniture factory.	49	13	13	9 11 0	3 18 0	0 14 8
Total	...	158	152	197 10 0	50 1 0	1 12 0
Regulation 15	...	4	4	14 10 0	1 4 0	
„ 16	...	4	4	5 10 0	1 4 0	
„ 17	...	2	2	3 0 0	0 12 0	
Total	...	10	10	23 0 0	3 0 0	

The number of cases in which convictions were recorded during 1914 was nearly double the number recorded for 1913, viz., 152 as compared with 83. Of the cases in which convictions were not obtained, 3 were dismissed and 4 withdrawn, in two instances upon the payment of costs by the defendant. The total penalties imposed was £197 10s., with costs £50 1s. The average penalty imposed was £1 12s., and the average costs 6s. 7d. The highest penalty imposed, £10, was upon information laid under section 33 (failure to fence dangerous machinery), and the defendant in this case had been fined £10 for a similar offence in 1913. The lowest fine imposed, 1s., was under section 49 (for working before 7.30 a.m., in a furniture factory).

In addition to prosecutions taken under specific sections of the Factories and Shops Act, 10 cases were taken under regulations made under the Act, viz., 4 each under regulations 15 and 16 (water-closet and lavatory accommodation), and 2 under regulation 17 (drinking water). Convictions were recorded in all cases, the penalties imposed amounting to £23, with £3 costs; the average penalty being £2 6s. In one case, under regulation 15, a penalty of £10 was recorded for not providing proper closet accommodation.

Of the 152 convictions under sections of the Act, the majority were for an infringement of section 43, relating to record of overtime, payment, &c., the average penalty imposed in these cases was 14s. 4d.

The number (56) of convictions under this section (43) during the year 1914, as compared with the year 1913 (16), was increased by 40, representing 250 per cent. The section referred to provides that any person contravening any of its provisions " shall be liable on conviction to a penalty for the first offence not exceeding Five Pounds and for any subsequent offence not exceeding Twenty Pounds." It is interesting to note that while the prosecutions under this section increased to a remarkable extent the average penalty imposed viz., 14s. 4d. has no appearance of being sufficiently severe to operate in the direction of decreasing the defaults under the section.

Thirty-one convictions were obtained under section 33, which provides for the secure fencing of all dangerous machinery; the average penalty imposed was £2 11s. 7d. Section 56 of the Act provides that the maximum penalty for offences for which no penalty is prescribed is £10. Under this section, 13 convictions were recorded during the year 1913, and 31 in 1914. The penalties imposed do not appear to be commensurate with the risk of accident to which employees are exposed where working at unfenced dangerous machines. The maximum penalty (£10) was imposed only in one case during 1914; the defendant had been fined for a similar offence in the previous year.

The number of accidents reported in factories during the year 1914 was still considerable, numbering 440 for all factory districts. Though blame may be attributable in some instances to negligence and carelessness on the part of the employee, any neglect to securely fence dangerous machinery should be dealt with severely. The State recognises the importance that every life saved is a national asset and has imposed a duty upon employers by sections 33 and 34 of the Factories and Shops Act, 1912, to minimise the danger to employees arising out of the use of machinery. Safety appliances by relieving the tension under which men labour curtail the risk of accidents; ensure the health of the worker, add to his efficiency and that of the State generally.

Convictions

Convictions recorded for non-compliance with section 33 increased by more than 140 per cent. in 1914, as compared with the preceding year, but the fines imposed (averaging £2 11s. 6d.) still seem inadequate.

Employment of Children.—Under section 45, a person under the age of 16 is prohibited from employment in such classes of factories as may from time to time be determined by regulation, unless the occupier of the factory has obtained a certificate, in the prescribed form, of the fitness of such person for employment in that factory. This section was designed obviously for the protection of young persons against employment in factories in which processes are considered to be detrimental to physical development, or likely to impair their health. During the year 1913 no less than 4,730 certificates of fitness were issued, viz., to males 2,201, to females 2,014, total 4,730. The total number of persons under the age of 16 employed in all factories at the end of the year 1913 was 4,883, being but 153 in excess of the number of certificates issued during that year. A number of certificates issued were to persons, who during the year, would have attained the age of 16 years. I am unable to report in respect of the operations of this section for the year 1914, as the relevant statistics were not published monthly; but during March, April, and May of the year 1915, certificates of fitness were issued as follows:—March, 464; April, 373; May, 476; a total of 1,303 for three months, or a rate of 5,212 per annum, which indicates that there has been no falling off in the number of certificates issued.

Apparently, practically all persons under 16 years of age employed in factories, are employed in those factories which are subject to the prohibition of section 45. The number of applications for certificates of fitness which have been refused has not been recorded in the monthly operations of 1914. Despite the fact, as evidenced by the number of certificates of fitness as compared with the number of persons under 16 years of age employed in all factories, that the provision for the issue of a certificate of fitness has been most liberally used by employers, there is still evidence of failure to observe the requirements of the Act in this regard as witness 22 prosecutions instituted for breach of section 45. In these cases the average penalty imposed was 17s. 7d.

Section 40 prohibits the employment of children in any factory unless by special permission of the Minister; "child" as defined by the Act means "any person under the age of 14 years." Two convictions were recorded against offenders in terms of this section, the penalty being 10s. in each case.

The information contained in the table of prosecutions, and the subsequent paragraphs indicates that the penalties which have been imposed cannot be regarded as severe; in fact, viewed as deterrents, they are wholly ineffective.

The increases in prosecutions in 1914 have been under those sections of the Act which provided the greatest number of cases in the previous year and which are of the greatest importance to the State, viz., sections 33 and 45, having regard respectively to the protection of persons under 16 years of age, and the safety of the employee from dangerous machinery.

Accidents.—Though the area of several Factory districts were extended by proclamation in January, 1914, there was a decrease in the number of accidents reported for that year as compared with the number reported for the year 1913. The figures were respectively 440 and 480. During 1914 nine fatal accidents were recorded, representing a decrease of 4 upon the number recorded for the previous year. Of the fatal accidents, 7 occurred in the Metropolitan District, and one each in the Newcastle and Western Districts. No accidents were recorded for the Albury or the Goulburn Districts, and only one accident was reported in the Broken Hill District. By section 38 of the Factories and Shops Act, 1912, written notice must be forwarded to the Inspector of the district of any accident produced either by machinery moved by steam, water, or other power, or through vat, pan, or other structure filled with hot liquid, or molten metal, or other substance, or by explosion, or by escape of gas, steam, or metal which—

(*a*) causes loss of life to any employee in the factory or—

(*b*) causes bodily injury to any employee in the factory such as to prevent him from returning to his work in the factory within forty-eight hours of the occurrence of the accident.

In five instances prosecutions were instituted for breaches of this clause, convictions with penalties being recorded in each case.

The following table shows the number of accidents during 1914, reported in each Factory district of the State:—

District.	Jan.	Feb.	Mar.	Apl.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Metropolitan	29	38	42	30	24	47	38	44	30	16	24	28	390
Newcastle	2	4	1	3	1	5	2	5	1	2	2	10	38
Western	...	...	1	...	3	...	2	...	...	4	...	1	11
Broken Hill	...	...	...	...	...	1	...	...	...	...	...	...	1
Goulburn	...	...	...	...	...	...	...	...	...	...	...	...	...
Albury	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	31	42	44	33	28	53	42	49	31	22	26	39	440

The greatest number of accidents has occurred in factories where wood-working machines are used. I have grouped the industries in which accidents have occurred as follows:—Wood-working, 118; Engineering, metal, &c., 115; Preparation of food, drinks, &c., 66; Printing and paper box making, 51; Brick, Tile, and Cement works, 21; Textile

Textile, clothing, &c., 20; Sundry industries, 49. The percentage of all accidents to all persons employed in factories was ·5 or five accidents for every 1,000 persons employed, but I am unable to show the percentage of accidents to persons employed in each group of industries.

Frederick L. Hoffman, L.L.D., Statistician of the Prudential Insurance Company of America, in an address upon "Industrial Accidents in the United States, and Their Relative Frequency in Different Occupations," showed that the non-fatal accidents recorded under the Workmen's Compensation Law in the United Kingdom in 1912, in specified factories, numbered 188,480. The table is here reproduced for purposes of comparison :—

Factory.	Persons employed.	Accident rate per 1,000 employed.*	Factory.	Persons employed.	Accident rate per 1,000 employed.*
Cotton	612,985	21·62	Other metals	801,814	49·54
Wool worster	280,573	11·66	Paper and printing	322,447	14·51
Other textile	248,669	13·17	Pottery	72,834	15·69
Wood	135,257	40·50	Miscellaneous	1,990,480	25·64
Metals (extracting)	437,160	78·51			
Shipbuilding	348,212	92·79	Total	5,250,431	35·90

* 188,480 accidents recorded.

It is evident that the rate of accident per 1,000 employees in Factories in the United Kingdom was extremely high in comparison with the rate of reported accidents per 1,000 employees in factories in New South Wales, the proportion being more than seven to one.

The shorter hours worked in factories and the advantage of natural light, &c., throughout the whole of the year in the majority of the factories in New South Wales, may be regarded as considerable contributors to the prevention of accidents. I am unable to make any computation as to the time lost to each industry by accidents to employees or to relate the extent of injury suffered by employees to the machines at which the accident occurred. The following summary indicates the nature of injury received :—

District.	Injury to—							Fatal.	Total.
	Hands.	Arms.	Legs.	Feet.	Head.	Body.	Burns.		
Metropolitan	305	28	5	17	11	17	...	7	390
Newcastle	26	3	...	4	...	3	1	1	38
Western and Broken Hill	6	1	...	1	1	2	...	1	12
Total	337	42	5	22	12	22	1	9	440

The Workmen's Compensation Act, 1910, prescribes that "If in any employment to which the Act applies, personal injury by accident arising out of and in the course of the employment is caused to a workman, his employer shall, subject to the provisions of this Act, be liable to pay compensation in accordance with the Second Seehdule to this Act."

Section 6. The employer shall not be liable under this Act :—

(*a*) In respect of any injury which does not disable the workman for a period of at least two weeks from earning full wages at the work at which he was employed; or

(*b*) In respect of any injury which is directly attributable to the serious or wilful misconduct of the workman.

Factory, as defined by Section 1 of the Act means factory as defined by the Factories and Shops Act of 1896 or any Act amending the same.

The returns furnished to the Minister under Section 19 of the "Workmen's Compensation Act," were published in the May issue of the *Industrial Gazette*, and show that during the year 1914 there were 430 accidents in factories; that compensation paid in respect of these accidents amounted to £6,321 1s. 7d. Of the accidents, nine were fatal, the amount of compensation in these cases was £2,774 6s. An estimate as to the extent of the injuries received by workmen may be based upon the periods during which compensation was paid to such workmen in cases in which payment was made upon a weekly basis. The number of accidents and the period during which compensation was paid were as follows :—

Period.	No. of cases.
Less than 2 weeks	98
2 weeks and less than 3 weeks	59
3 „ „ „ 4 „	64
4 „ „ „ 13 „	154
13 „ „ „ 26 „	19
26 „ „ over	4
Total	398

In addition to these cases there were twenty-three non-fatal cases in which compensation was paid in lump sums, and nine fatal cases. It will be seen that there were 241 accidents which involved loss of more than one month's employment and which are to be regarded as serious. Comparing the numbers of accidents recorded for the year 1914 under the Factories and Shops Act, 1912, with the number of accidents recorded as occurring in factories, and for which compensation has been paid under the Workmen's Compensation Act, 1910, during the year 1914, viz., 440 and 430 respectively, the difference of ten apparently represents those accidents in which no compensation was paid.

The

The provisions of Part II of the Factories and Shops Act, 1912, have been well observed by employers. In many of the new factories especial care has been taken in regard to lighting, ventilation, means of escape from fire, and sanitary conveniences, and the workrooms generally are attaining better standards.

INSPECTOR CLARKE reports :—

The factories visited by me during the past year were confined to the limited area in which I had jurisdiction, with the exception of some relieving work done in Inspector Pickering's district during his recent illness.

The number of factories within the district has increased, and the general conditions of same with respect to cleanliness and sanitation are fairly good.

The guarding of machinery has received special attention. Occupiers generally show a ready disposition to do whatever is required in this direction, but in some instances exception was taken to the installation of improved guards where obsolete and ineffective safeguards had been for some time in use, the instances being chiefly confined to the circular saw and the type of protection termed splinter guards.

Accidents.—Most of the cases investigated occurred where wood-working machines are in use, but the largest proportion of these were due, rather, to inadvertence on the part of the operator than to the absence or ineffectiveness of the safeguard appliances. In one case, however, to the contrary, where a man has practically lost the use of one hand by being crushed in the bevel gear of a saw mill, no guard had been provided, but this omission has now been remedied.

Prosecutions.—Several occupiers who had failed to protect machinery where ordered were proceeded against and convicted, as also were others with respect to being in occupation of unregistered premises and employing persons under the age of 16 years without obtaining certificates of fitness.

The bulk of my work, I should point out, has been occupied in another jurisdiction, the foregoing being sandwiched in whenever the opportunity presented.

INSPECTOR NOLAN reports :—

During the latter part of the year I was engaged in factory inspections in Paddington, Woollahra, and Waverley. The number of accidents in factories in the districts mentioned was very small.

Generally speaking, I have found occupiers willing to adopt suggestions with regard to the well-being of the employees, but in very few cases has action been taken by them to attain that result on their own initiative; they invariably await a visit by the Inspector, and I am inclined to believe that the card system—apparently established for the purpose of giving directions under section 34—has been somewhat abused, as the cards are used for the purpose of giving directions to comply with every section of the Act and Regulations.

With regard to the registration of factories (section 6) I have found that the assistance given by the Department (by forwarding the necessary forms) has in some cases not been appreciated. In one case, quite by accident, I discovered a factory in which dangerous machinery was installed and several persons employed. I drew the occupier's attention to the necessity of registering the factory, and the day following my visit the necessary application forms were sent to him by the Department. No advantage was taken of this. A further reminder by the Department, and a second visit by myself were similarly ignored, with the result that the occupier was prosecuted and fined for being in occupation of an unregistered factory. In another case I discovered a factory in which several dangerous machines were installed which was not registered. In both of the above factories neither had made any provision with respect to the guarding of dangerous machinery, and if not discovered the machines used would probably be running to this day, unguarded and dangerous.

With a view to extending the Act to embrace this class of machinery I would like to draw attention to the frequency of accidents occurring with a certain type of winch, particularly on wharves and in quarries, where such winch is so fixed that the ratchet of the end of the drum falls out of place. Should two men be employed winding the winch, and one releases his hold, or, as in some cases, through ill-fitting handles slipping off, the whole weight is thrown on to the other man, with the result that the handle is torn from his grasp, and in flying around generally strikes the head, with nearly always fatal results. I consider that this type of machine should be provided with suitable brakes and handles, and in every case the winch should be so fixed that the ratchet would be always in use.

INSPECTOR LYNCH reports :—

During the year my work was confined almost entirely to industrial inspections. A considerable portion of my time was taken up in western towns beyond the factory area. I was able to contrast the condition of the factories in those districts with those within the factory area under the Act. What

What was particularly noticeable in those districts was the wholesale neglect of providing safeguards against accidents where dangerous machines were in use. In saw-mills generally and in several fairly large establishments where circular saws, planing machines, and other wood-working machines were in use, I noticed that no guards were provided, and the belting was left entirely unfenced. In regard to the space allowed for the employees to work in and ventilation there did not appear to be anything to complain of, but the general cleanliness of the factories was very much inferior to those within factory districts.

My factory work in the city was confined to a small area, which I worked in conjunction with another Inspector. I found the conditions generally fairly satisfactory, and observed a willingness on the part of factory owners to comply with any orders to provide guards on or to fence machinery.

In conclusion I might say that while the conditions under which factory workers are working shows an improvement, there still remains a lot to be done before a high standard is reached, more particularly where the buildings are not of modern design.

INSPECTOR HUNTLEY, Newcastle, reports: —

The year opened with great promise, and but for the outbreak of war, would have provided records in all industries. Even with the partial paralysis of trade following the declaration of hostilities, the results achieved must be regarded as satisfactory, and encouraging. In the principal industry, that of Coal, the returns show that 4,753,505 tons, valued at £2,488,449 were transferred and exported to places beyond the State of New South Wales. The figures for the previous year were 5,236,621 tons, valued at £2,725,621—a record. The collated returns in this industry disclose that from the year 1910 this district has shown a steadily increasing production of coal, until, for 1913 it established the record given above. That such splendid progress would have been maintained during 1914, but for the war, is evident from the figures for the six months ended 30th June last, which show that 2,600,000 tons were exported as against 2,300,000 tons for the same period in 1913. For the half year between 30th June and 31st December, 1914, the export had fallen to 2,153,505 tons, clearly showing the disastrous effects of the war upon the trade of the port.

The total weight of the coal shipped during 1914, including the export figures above, amounted to 5,318,906 tons, being an increase of 661 tons upon the figures for 1913. It is evident, therefore, that, while owing to the European war and resultant restrictions placed upon foreign export at the request of the Imperial Naval Authorities, a decrease in coal exported could only be expected, there was a corresponding increase in the coal shipped for consumption within the State. The total coal produced during 1914 amounted to 7,113,991 tons as against 7,402,627 tons in 1913, being a decrease of 88,636 tons. It must be remembered that the afternoon shift strike, embracing five large collieries, began in May, 1914, and in spite of every effort at settlement, was still in progress when the year closed.

The exports other than coal (not including interstate transfers) reached a value of £943,097 as against £589,841 realised during 1913. The imports for the year were valued at £1,304,538, being £229,956 in excess of the previous year. The revenue collected amounted to £321,856 8s. 1d., a decided advance upon the previous year's figures which were given as £230,073 17s. 8d.

The building trade for the greater portion of the year showed a distinct improvement upon the previous year's operations, both in numbers, and in a better class of structure. For the year ended 30th June, 1914, the approximate capital value of the new buildings, and improvements to existing buildings within the municipalities of Newcastle, Carrington, Merewether, Wickham, Hamilton, and Waratah, was £154,865. During the latter half of 1914 the building industry, in common with most others, suffered severely in most of its branches from war effects. Bricklayers were in great demand throughout the year, mainly by reason of the large number absorbed at the Steel Works.

Splendid progress was made by the Broken Hill Proprietary Co. with the construction of its Steel Works and Iron Works at Port Waratah. What was practically a hopeless waste of land is being converted into a site of thriving manufacturing industry. The area occupied by the works is 264 acres. The army of employees was reduced to about 200 at the outbreak of the war, but after a lapse of about two months, extended operations were again renewed, and at the close of the year about 1,200 persons were engaged. It was anticipated that the first pig iron would be produced in March, 1915, and such anticipations were realised, one blast furnace being in full operation at the time of writing. Provision has been made for six of such furnaces. The Company intends to make its own coke, and for that purpose has installed sixty-six Semet-Solway Coke ovens. A feature of the works will be the total elimination of the necessity of handling material. Almost everything will be accomplished by mechanical equipment, of the most modern type. Motive power to the extent of 12,000 H.P. steam, and 2,000 electric has been supplied, and it is expected that, for all purposes, 400,000 tons of coal will be consumed annually. These works the greatest of their kind in the Southern Hemisphere, must prove of tremendous industrial value to this district, in the immediate future. It is not too much to say that even in their constructional stage, what threatened to be a grave unemployment crisis, was greatly reduced by the maintenance, at such works, in constant

 employment,

employment, of a large number of men. When it is remembered that the metal imports into the Commonwealth during 1913 were valued at £7,425,000 it will be understood that the local iron and steel industry will have a ready market for its output.

In position immediately opposite the Steel Works, the Walsh Island Dockyard assumed much larger proportions during the year. The official opening took place in November, 1914, and there is no doubt that the works under construction will compare very favourably with any similar works in the Commonwealth, if not in the world. All the buildings, one being 500 feet long by 120 feet wide, are of modern type and equipped with the most up-to-date machinery. Two of the building slips have been completed, and two others, and a patent slip are in course of construction. The patent slip is designed to take any of the Departmental floating plant, and will be capable of dealing with the largest vessels at present trading in these waters. The engineering work-shops, which for many years stood at the southern end of the Carrington Dyke, have been taken down, and the buildings and machinery have been added to the new works. The whole of the machinery throughout the works is driven by electric power supplied by the Railway Commissioners.

At the works of the Sulphide Corporation, Ltd. at Cockle Creek, the ore treated produced 26,076 tons of lead, 35,454 oz. of gold, and 1,972,553 oz. of silver. There was also produced in the same period about 15,000 tons of sulphide superphosphate manure. These works felt the war strain for some few months during the year, but conditions became normal before the close of the year.

At the English and Australian Copper Company Works, New Lambton, the ore treated during the year produced copper ingots valued at £35,000.

Operations at the Australian Coking and By-Products Co., Ltd., Islington, were suspended early in the year. This was a distinct industrial loss, as a large amount of capital had been expended, a large modern plant erected, and there was every prospect of steady employment for a large number of men. It is reported that the Company is being re-constructed, and may resume operations in the near future.

At the British Australian Oil Company's Works, Hamilton, an average of seventy-five employees was maintained during the year, but unfortunately in Ferbuary last the works were closed down by order of the Receiver, appointed in London.

The Factory returns disclose that at the end of the year there were 583 factories registered in this district, being an increase of 11 upon the figures for the previous year. The total number of person engaged is shown to have been 5,477, being 506 less than were employed in 1913, and a less number than has been employed for the past three years. Divided according to the sexes, the loss is shown as 289 males, and 217 females. Certificates of fitness to work were granted to 345 under the age of 16 years, viz., 214 to boys and 131 to girls. The Minister gave permission during the year for 7 boys under 14 years to be employed.

The decrease in the number of persons engaged during the year is shown by the accompanying tables to have been spread over many industries, printing and oil refining only showing an increase. One of the chief aids to the decrease was provided in the biscuit industry, Messrs. W. Arnott's, Ltd. having transferred a good deal of work from their Newcastle factory to their head factory premises at Strathfield. One hundred and seventy-nine hands were affected at Newcastle, the number of employees falling from 273 in 1913 to 94 in the year under review. The local factory has provided employment for several hundred persons annually for many years, and its diminished operations involve a heavy industrial loss to this District. Other decreases are found in,—smelting 110, brickmaking 80, dressmaking 77, engineering 76, tailoring 73, and breweries 23. It must be remembered, however, that the records for 1914 were garnered in October, a month earlier than usual, and at a time when many industries were seriously affected by the war. Employment generally had much improved by the end of the year.

Inspectorial work under the Factories and Shops Act was much interrupted during the year, first by duties under the Industrial Arbitration Act, involving several journeys to the north and north-west, and later by the exclusive attention given, after the outbreak of war, to unemployment matters. All new work was, however, kept up to date, and the assistance of Inspectors Gregory and Young availed of whenever possible. When it is remembered that the area overlooked by this branch of the Department extends from Woy Woy to the Queensland border it will be readily understood that the hands of a limited staff must always be very full, and any interruption in the regular routine of inspection work is not easily made good. In the interests of employers and employees alike, there is proved value in the maintenance of regular inspections, and there is ample work in this district for one, if not two, additional inspectors.

Fencing and Guarding of Machinery.—All possible attention was given to this most important feature, and it may be safely said that the provisions of the Act relating to same were well observed. The objections to the valuable guards in the wood working industry are being gradually borne down, and the educative efforts of the Department much better understood.

Accidents.—Thirty-nine accidents under section 38 were reported during the year, one resulting fatally. This happened at a Foster rotary printing machine, in a newspaper office. The victim, a mechanic of long experience, went into the pit under the machine, and was brushing the revolving type with his hand, when his arm was drawn in and severely crushed. He died shortly afterwards. I attended the inquest, where a verdict of accidental death was returned.

Of

Of the remainder the greatest number happened in the wood working industry, and a few of the more serious being briefly described hereunder :—

At a saw-mill a boy was seen leaning on the hood of a surfacing machine. He was ordered away, but returned, and after standing at the machine some little time was heard to call out. It was found that his left arm had been caught, and later amputation at the elbow was necessary. The boy admitted that just before he was hurt he had been letting his fingers rest on the feed roller.

In a toy factory a girl 17 years of age was instructed by the foreman to help him at a thickening machine. In some manner her left hand was placed under the hood covering the knives, and the hand amputated. This accident illustrates the need for a sensible extension of the list of prohibited machines under section 41 of the Act.

In special regard to the machines at which the above accidents happened, it will be remembered that the cutters of the machines are protected to a certain extent by iron hoods. It is not possible, except as part of a system of shaving exhaustion, to wholly cover the knives, else the blades would soon become choked, and render the machine inoperative. When a system of dust and shaving exhaust is in vogue at a saw-mill, the connection is made at the hood over the knives, which are thereby completely protected. It is not reasonable to ask for an exhaust plant to be provided in small establishments, but I have proved that without such up-to-date equipment, the machines referred to can be rendered much safer, without impairing their efficiency, by the placing of bars of small circular iron across the mouth of the hood.

In a cooperage, a newly-started employee was " listing " staves at a circular saw. He had only been at work a short time when his right hand came into contact with the saw, and his four fingers were amputated at the knuckles. Previously the occupier had worked this saw himself, and would not use a guard. I am satisfied that the use of a guard with a " drop front " protecting the front of the saw, would have prevented this serious accident. One has since been provided.

Sanitation.—Occupiers are, in the main, so fully seized of the great advantage of having their premises up-to-date in every particular that it is not surprising to find each year an improvement in sanitary conditions. Of course, premises are frequently found in such a condition that special attention is required, but " untidy " rather than " insanitary " describes such condition. Only one prosecution was instituted during the year for not keeping factory premises in a cleanly state. Splendid progress has been made with the new sewer, and the City proper (with few exceptions), Hamilton, Merewether, and Wickham, are now connected therewith, while the sewerage of Adamstown is in progress.

Ventilation and Lighting.—Occupiers, as a whole, are very solicitous that their factory employees should have pure air to breathe, and good light for their work, realising that it is a mistaken policy not to consider the health and well-being of the operative, as well as his output. Any instructions or recommendations have been at once complied with, and there is genuine evidence that the employers in this district desire to keep pace with the times.

Fire Escapes.—All fire escapes in factories in this district were inspected during the year, and the provisions governing same found to be observed. Such inspections were made in company with Mr. Gorman, Divisional Officer, Metropolitan Fire Brigade, whose valuable assistance is always at the Department's disposal.

Prosecutions.—Four prosecutions resulted during the year under review, all being well merited by the inattention shown. In a brickworks I found a heavy belt travelling at a high speed, totally unfenced, although two employees had to work within a few feet of such continuous danger. The magistrate imposed a satisfactory penalty.

In a cordial factory I found the fly wheel of a gas engine not securely fenced. Female employees were at work a short distance from such danger, and it was proved that the fly wheel had been in such unprotected condition for several weeks. The occupier was fined.

A bakehouse was found in such an uncleanly condition that proceedings were instituted, and a fine imposed.

In a large tailoring establishment I found twelve employees at work in a room which provided air space for five only. Prosecution resulted, and the occupier was fined.

Employment of Young Person at Dangerous Machine y.—Although the employment of females, and males under 16 years is prohibited at certain machines, it is, in my opinion, absolutely necessary that the Minister's order, now in force in relation to same, should be extended to embrace many machines not included in such prohibition. Experience has proved that boys, often from the country and without any previous knowledge of machinery, have, immediately upon employment, been given work at machines which present danger to the uninitiated. It would seem that a probationary period should be established during which no boy could be permitted to work at any power-driven machine. The time allowed to " feel his feet " would be invaluable to the beginner, and no loss to the employer.

Labour Exchange.—In September last a Labour Agency was established in connection with this office, and has proved of great assistance to employers and those seeking work. During the three months following the outbreak of war there was considerable industrial unrest, and the palliative efforts of the Agency were of high value at such a critical time. Eight hundred and thirty-eight men were registered at the end of the year as seeking employment. Such number has at the time of writing been increased to

1656 and the operations of the Agency sensibly extended. Having had immediate control, since its establishment, of this new adjunct to the Department's work, and having been almost exclusively engaged in its affairs, I am able to say, from results achieved, that such a Labour Exchange was badly needed, and will, almost daily, increase in value to the community.

Outlook for 1915.—With the basic or coal industry severely handicapped by war effects, and other important industries more or less adversely affected, it is difficult to form opinions regarding the prospects for the present year. At the outbreak of the war this district was in the heyday of prosperity, and it is to be sincerely hoped that with the termination of hostilities the Newcastle district will again enjoy such splendid conditions of industrial energy and progress.

INSPECTOR GREGORY, Newcastle, reports :—

My time was substantially employed in prosecuting industrial work for the year 1914, and I therefore cannot express definite views upon the operation of Part 2 of the Factories and Shops Act until I have made a periodical inspection of the whole of the district.

INSPECTOR YOUNG, Newcastle, reports :—

In conjunction with Industrial and Early Closing inspections, I have been able only to devote a small portion of my time to the factory inspections during the year 1914. From my investigations into accidents and general inspections I should say that the proprietors of factories in this district are in a fair percentage of cases desirous of carrying out the provisions of the Act and Regulations, and willingly attach guards to parts of machinery which are pointed out as being dangerous. My investigation into accidents have shown me that on several of the cases the accident could have been avoided but for the carelessness of the employee, especially so in the case of small circular saws when short work is being done. Two accidents happened to the one youth who was ripping small pieces of soft wood, 15 inches, on a saw 12 inches in diameter by pushing the material in under the guard with his finger. Other accidents that I investigated, the employee, as well as the employer, assured me that every precaution had been taken to guard against accident, and I saw no reason to doubt this.

My inspections of bakehouses, small goods manufacturers, and factories generally, found them to be fairly up-to-date and clean, and the sanitary arrangements as good as could be expected, as we still have a great many places where the pan system is in use.

Notwithstanding the war, work has been very regular in the factories of the district, and I believe this district has felt the effects of the war less than any other.

I was pleased to note that the provisions of the Act have recently been extended throughout the State, as I have had visits to a number of country towns, and was struck with the total absence of guards to dangerous machinery, and in several cases I pointed out the danger to employees and employers, with the result that they promised to introduce some of the suggestions I made, although not covered by the Act.

INSPECTOR BAKER, Western District, reports :—

The past year was a busy one in this district, but as a large proportion of my time was taken up in connection with investigations and prosecutions under the Industrial Arbitration Act, I was unable to devote as much to the important work of factory inspections as I might otherwise have done. Notwithstanding this fact, a considerable amount of progress was made. In the early part of the year all the important towns in the newly added portions of the district were visited, registration applications received, and the principal requirements of the Act explained to occupiers of factories.

The following is a list of the towns visited on the occasion mentioned, viz. :—Gulgong, Mudgee, Carcoar, Cowra, Canowindra.

In some of these I found that many of the occupiers were not aware of my intended visit, although same had been advertised, and I found it necessary to call on as many as I could, and inform them personally of the need to register. A hurried search round the town remedied this defect to a large extent.

Later in the year I had an opportunity to make thorough inspections of the factories in these towns, and, as was to be expected, in some of the old ones I found several of the premises much below the standard required by the Act. When the defects (caused mostly by dilapidation) were too great to be remedied by repairs and alterations, the structure was condemned, and new premises built. In other cases, when it was possible to renovate the existing structures, and by so doing make them suitable, the necessary orders were served on owner or occupier.

Although some of the owners raised no objection to my instructions regarding these matters, others did, but I am pleased to say that in no instance was it found necessary to invoke the aid of the Courts in having the jobs carried out.

I also gave close attention to the fencing and guarding of the machines and mill gearing in these factories. In nearly every case I found the whole of the machinery quite unguarded.

Much opposition is met with from occupiers when instructed for the first time to fence or guard machinery and mill gearing. Why this objection is taken is a mystery to

to me. In the majority of cases the cost of erecting the fences is negligible. If the guards reduced the efficiency of any of the machines, the position taken up by the objectors could be understood, but it is obvious that the reverse is the case, as an operator can go about his work with greater confidence and do more work at or amongst well-guarded machinery than is possible when it is not made secure and when a false step may cause serious injury.

Accidents.—During the year I investigated 13 accidents under section 38 of the Act. One of these proved fatal. It occurred in a large cement works. From investigations made by me on 29th October, it appears that on the 22nd of that month an employee tried to put a belt on a conveyor, and in doing so went inside a two-railed fence, which had been erected as a protection against accident. What actually happened will never be known. When I made my inspection I was shown a broken belt, a broken rail, a driving pulley coated with some sticky substance, and a machine with a spindle and pulley. The whole of these were on a floor or platform about 25 feet from the ground floor, and between an operator at the machine and the edge of the platform was the two-railed fence above mentioned. No one witnessed what led up to the accident, but the unfortunate employee was seen to fall from the platform to the floor below. This floor is of concrete, and in falling his head struck the floor with great force, the inujries being such that death resulted. I am of opinion that the employee went through the fence for the purpose of placing the machine belt on the driving pulley, which was on the main shaft. It was this pulley I found coated with a sticky substance, probably resin and oil. It is probable that the belt fell off the machine pulley and hung on the spindle. The sticky substance on the small driving pulley apparently caused the slack side of the belt to be carried up and under the top side, the whole then began to wind up until held by the machine spindle. The strain to which it was subjected was so great that the belt broke, and in rebounding carried away the rail and knocked the unfortunate employee off the platform. In these works a special staff of men is employed to attend to the mill gearing, and notices to that effect and cautioning other employees not to interfere with such things are posted up in several conspicuous places in the factory. The employee who was killed was not one of the staff mentioned.

An employee at a flour mill was badly maimed in an accident which occurred to him while attempting to put on a small belt to work a conveyor. The unfortunate man lost his right forearm.

The trouble appears to be that many of the employees in factories have no idea of the potential dangers which such an operation exposes them to. The belt responsible for this accident was only 2 inches wide and was driven by the main shaft. The pulley on the conveyor was of small diameter, the speed of the machine was slow. The man was too badly injured to be interviewed by me, but from information supplied by the miller, who was early on the scene, it would appear that the employee, for some reason which is not apparent, was doing something at the main shaft, which was 7 feet 10 inches above the floor, and in some way had his arm caught in between the belt and the shaft, the result being that the forearm was torn off. The unfortunate man walked upstairs to the floor on which the miller was and reported the accident to him. The miller at once had him conveyed to the hospital. This accident should not have occurred, and would not if reasonable precautions had been taken by the operator before attempting to place the belt in position.

Another accident, which fortunately resulted in only a slight and temporary injury, but which at the same time was a miraculous escape from a fearful death, occurred at a large brickworks. An employee, 20 years of age, went inside a fenced enclosure guarding several large belts and pulleys for the purpose of replacing a belt used for driving the elevator. The mill gearing was in motion. The employee proceeded along a narrow platform for several feet, and was then struck on the head by one of the large belts. He fell on the platform, on either side of which and slightly below were the yawning in-takes of the large main belts and pulleys. If he had not fallen directly in the centre of the platform he would certainly have been mangled to death in one or other of these belts and pulleys. The manager has since found work for the employee in a portion of the factory in which mechanical power is not employed.

A batch of scalding accidents (3) occurred at one time in an engine room. The persons injured included the manager, engineer, and foreman fitter, while several other employees were slightly scalded. It appears that some overhauling was being done to one of the engines. The piston was exposed and the junk ring was being removed. A cavity in the piston had apparently become filled with liquid, the temperature of which was equal to steam at 120 lb. pressure. On the junk ring being removed this liquid was liberated and converted into steam, which scalded the persons at work on the engine. The manager stated that he had never before known of an accident caused in this way, and that to prevent the possibility of a recurrence he had made provision for the draining off of any liquid which might again accumulate within the piston. No permanent injury resulted from these accidents.

A peculiar double accident occurred at a joinery works. An employee was engaged cutting a slot in a piece of timber at a saw bench. The slot was through the wood, but not the ends. Only a small portion of the saw blade was allowed to project through the bench. What was to be expected happened. The saw took charge of the wood, and threw it off the bench and cut the operator's hand at the same time. The wood in its flight struck another employee in the abdomen with considerable force. The saw-bench operator received a severe cut on the palm of the left hand, and the other employee a nasty blow in the abdomen, but both recovered within a short time.

Two accidents at jointers resulted in the loss of finger joints. In each of these the machines were fitted with guards, but they had been set too high by the operators.

The remaining accidents were caused mostly by burns and scalds.

Prosecutions.—There was only one case taken by me during the year for breach of the Factories Act. The occupier, a baker, was proceeded against for being in occupation of unregistered factory. The premises were unsuitable for a bakehouse. A fine was imposed.

Sanitation.—Although, as before mentioned, a large proportion of my time was taken up in other important matters, I am able to report a satisfactory improvement in the structural and sanitary conditions of the factories visited. In one small town alone two new and up-to-date brick bakehouses now stand in the places of the dilapidated structures in which I found the principal article of food being manufactured when the town was first visited by me, and in many other industries the old buildings have disappeared, and the work is now being done in new and sanitary premises.

There is a lot yet to be done, more especially in regard to sanitary conveniences at factories in the large towns, but this work cannot be satisfactorily carried out, more especially in the congested portions of the towns, until sewerage is installed.

The sewerage of Lithgow is now complete, and has already proved a distinct advantage to that town, and I hope that in the near future both Bathurst and Orange will be similarly served.

Periodical lime-washing of factories received attention. In many instances it was done voluntarily.

Registrations.— There were 308 factories on the Western District Register at the close of the year. This number would have been greatly exceeded but for the fact that just as I had arranged to visit a number of places for which application to register had been made, I was unfortunately prevented by illness from carrying out these inspections until after the close of the year. They have since, however, been added to the register.

There were 54 factories registered during 1914, and cancellations during that period numbered 32. There were 226 cards of instructions served on occupiers.

Certificates of fitness issued :—Males, 19; females, 6; total, 25.

Communications received totalled 619. Letters, notices, and reports posted totalled 779.

I have to report that up to the time of the outbreak of war nearly all the industries were flourishing, but unfortunately about that time a drought began to develop, which and in conjunction with the first-named disaster caused a considerable amount of unemployment and distress.

One large firm of furniture makers practically closed down their cabinet-making business towards the end of the year, and had trouble over the apprentices, whom they discharged. Action was taken by one of the lads against the firm for breach of contract, and he was awarded £50 damages. The firm then, I was informed, paid to each of the other discharged apprentices a similar sum.

I very much regret the closing down of these works, which I am convinced would have proved a good paying proposition, if properly managed, and a source of steady employment to a large number of skilled employees.

I have again to draw your attention to the urgent need for assistance in this district. A large additional area has been added to it since my appointment in 1912 as Inspector-in-Charge of the Western Factories and Shops District, and, besides the work under the Factories and Shops Act, I am also doing a large amount of work under the Industrial Arbitration Act. The thorough carrying out of the whole of these duties by one Inspector is, in my opinion, absolutely impossible, and I trust that some practical means will be adopted in the near future to remedy the unsatisfactory state of affairs which now exists.

INSPECTOR FIELD, Broken Hill, reports :—

In submitting this, my first annual report, may I be permitted to express my thanks to the officers and Inspectors of this Department for the kindness and courtesy extended me whilst in their midst. When first commencing my duties I was greatly assisted by my fellow Inspectors in Sydney.

Sanitation.—Taking all circumstances into consideration, the general sanitary conditions of factories may be said to be fairly satisfactory in this district. I have found the local Chief Sanitary Inspector of great help to me in the matter of sanitation. The factories here are not tied for room like the city premises, so are able to have their sanitary conveniences a fair distance from the workrooms.

In some factories dressing and dining rooms are provided, and are kept in a satisfactory condition.

Guarding of Machinery.—I have paid special attention to this part of the Act, and my knowledge of machinery has been of great advantage to me. I find that factory owners are only too willing to carry out instructions in guarding their machinery, and any alterations which have a tendency to minimize the danger of accidents.

The circular saw, used so much in wood yards, has caused me some concern, but I have them now all guarded against any serious accident.

Accidents

Accidents.—This district has been very free from accidents for the past year, the most serious occurring on a planer in a joinery establishment, through the negligence of the employee. A man was planing a small piece of wood, and omitted placing the guard in position, with the result that he is now minus the first four fingers of his left hand. Minor accidents have been reported, the loss of a finger being the most serious.

Prosecutions.—As I stated previously, the factory owners were only too willing to carry out instructions, therefore prosecutions have not been necessary.

Eighteen certificates of fitness have been granted to boys between the ages of 14 and 16 years, the majority being employed in printing works.

No complaints have been received of non-payment of overtime and tea money in factories and shops.

The latter part of 1914 will long be remembered as the worst period of depression experienced on the Barrier. The year started with every prospect of being a record one, both for the mines and the business people, but the international strife affected Broken Hill probably more than any other city in the Commonwealth. Not having a market for their lead and zinc concentrates the mines in many instances were compelled to close down, and in other cases to work part time with a greatly reduced staff.

For the first six months of the year the total number of workmen employed on the mines and in the factories was 11,573. On the 31st December this number had been reduced to 6,089, the number of male departures over arrivals by train on that date being 4,937. The mines then were employing 820 part time and 3,439 full time, and other industries 1,152.

Considering the desperate state of business here for the past eight months, it is surprising the number of employers who have survived so far the time of stress, and with hope are looking for better times ahead. The number of cancellations for the year total much less than would be expected.

APPENDICES.

ALL FACTORIES AND SHOPS DISTRICTS.

Table I.

Number of Factories on Register—1910-14.

Year.	Metropolitan.	Newcastle.	Broken Hill.	Western.	Goulburn.	Albury.	Tot
	Factories on Register.	Factories on Register.	Factories on Register.	Factories on Register.	Factories on Register.	Factories on Register.	Factor Regi
1910	3,670	524	83	71	87	98	4,
1911	3,843	569	73	255	125	104	4,
1912	3,989	589	125	266	137	97	5,
1913	4,322	572	129	287	149	102	5,
1914	4,579	583	148	308	188	187	5,

Table II.

Number of Persons employed—1910-14.

Year.	Metropolitan.		Newcastle.		Broken Hill.		Western.		Goulburn.		Albury.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1910	47,556	23,529	3,951	1,111	611	193	1,875	46	469	115	385	131	54,847	25,125
1911	52,085	25,420	4,290	1,177	576	187	2,994	345	620	141	395	120	60,960	27,390
1912	55,559	26,108	4,434	1,299	720	267	2,564	329	657	143	385	126	64,319	28,263
1913	57,831	26,314	4,637	1,346	751	269	2,680	346	709	133	378	130	67,046	28,538
1914	54,455	24,884	4,348	1,129	593	198	2,666	302	636	116	638	176	63,336	26,805

Table III.

Horse-power of Machinery used—1910-14.

Year.	Metropolitan.		Newcastle.		Broken Hill.		Western.		Goulburn.		Albury.		
	*Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.	*Number of Factories
1910	2,114	56,909	257	6,904	33	839	37	9,973	37	393	27	232	2,50
1911	2,231	60,598	316	7,290	31	770	126	10,456	55	676	34	320	2,79
1912	2,685	77,129	351	6,663	67	1,188	143	9,027	66	961	33	336	3,34
1913	2,919	84,693	351	6,851	71	1,231	145	9,017	70	999	34	366	3,59
1914	3,291	95,043	353	8,554	84	1,288	174	9,222	79	945	66	749	4,04

* In many factories more than one kind of power is used ; the figures in this column, therefore, are in excess of the actual number of factories usi

Table IV.

Number of Persons employed in each District—1914.

District.	Number of Factories on Register.	Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Female
Metropolitan	4,579	1,874	2,304	3,488	4,107	5,591	5,837	43,502	12,636	54,455	24,88
Newcastle	583	158	123	388	247	457	320	3,349	449	4,348	1,1
Broken Hill	148	21	11	43	33	44	57	485	97	593	1
Western	308	43	22	154	58	189	75	2,280	147	2,666	3
Goulburn	188	23	5	40	16	61	33	512	62	636	1
Albury	187	9	15	52	26	84	45	493	90	638	1
Total	5,993	2,128	2,480	4,165	4,487	6,426	6,367	50,621	13,481	63,336	26,8

ALL FACTORIES AND SHOPS DISTRICTS—*continued.*

Table V.

Horse-power of Machinery used in each District—1914.

District.	Steam.		Gas.		Electricity and other.		Total.	
	Number of Factories.	Horse-power.	Number of Factories.	Horse-power.	Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.
politan	504	56,157	719	11,886	2,068	27,000	3,291	95,043
astle	145	4,700	76	541	132	3,313	353	8,554
n Hill	11	617	31	335	42	336	84	1,288
rn	66	7,261	68	758	40	1,203	174	9,222
rn.....	31	452	25	358	23	135	79	945
y.....	15	336	28	320	23	93	66	749
Total	772	69,523	947	14,198	2,328	32,080	4,047	115,801

n many factories more than one kind of power is used ; the figures in this column, therefore, are in excess of the actual number of factories using power.

Table VI.

Classification of Factories in each District, according to Number of Persons employed—1914.

trict.	Number of Factories in which the number of hands employed are—															
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	Total.
olitan ...	1,692	1,410	693	277	134	136	65	40	57	25	26	10	3	3	4	4	4,579
stle	290	172	57	26	13	12	5	3	...	3	2	...	...	...	...	...	583
Hill.....	86	40	14	4	2	2	...	...	...	...	...	...	...	...	...	...	148
n	163	101	23	9	6	2	1	...	...	...	1	1	...	1	...	...	308
rn.....	124	45	14	3	1	...	1	...	...	...	...	...	...	...	...	...	188
.....	115	53	12	5	2	...	...	...	...	...	...	...	...	...	...	...	187
al	2,470	1,821	813	324	158	152	72	43	57	28	29	11	3	4	4	4	5,993

Table VII.

Number of Persons employed in each Class in Districts—1914.

Class of Factory.	Metropolitan.	Newcastle.	Broken Hill.	Western.	Goulburn.	Albury.	Total.
Treating raw materials, product of pastoral pursuits...	1,810	15	3	46	18	...	1,892
Oils and fats—animal, vegetable, &c.....	737	241	5	9	.....	1	993
Processes in stone, clay, glass, &c.	4,598	337	17	903	114	50	6,019
Working in wood	4,214	659	92	103	58	84	5,172
Metal works, machinery, &c.	10,980	1,204	104	643	26	45	12,999
Connected with food and drink, &c.	11,667	926	199	431	172	184	13,579
Clothing and textile fabrics, &c.....	22,250	1,088	201	361	235	195	24,324
Books, paper, printing, and engraving, &c.	6,156	273	70	138	34	59	6,704
Musical instruments, &c.	363	.....	.. ...	.....	... ..	.....	363
Arms and explosives	44	7	.....	.....	.....	.....	51
Vehicles and fittings, saddlery, and harness, &c.	2,679	230	35	161	70	157	3,332
Ship and boat building, &c.	1,953	49	.. ...	.....	.....	.....	2,002
Furniture, bedding, &c.....	3,563	134	2	22	5	4	3,730
Drugs, chemicals, and by-products.....	1,236	5	.....	.....	2	.....	1,243
Surgical and other scientific instruments	109	2	.....	.....	.....	.....	111
Jewellery and plated-ware, &c.	617	19	.....	.....	.....	4	640
Heat, light, and power	3,504	200	43	110	10	9	3,876
Leatherware, n.e.i.	524	.....	... ..	.....	.....	.....	524
Minor wares, n.e.i.	2,335	83	20	41	8	22	2,514
Total	79,339	5,477	791	2,968	752	814	90,141

METROPOLITAN DISTRICT RETURNS.

NOTE.—This District was proclaimed on 1st February, 1897, extended on 1st August, 1904, and further extended on 3rd October, 19

TABLE VIII.

Classification of Persons employed—1905-1914.

Year.	Number of Factories on Register.	Hands employed.								
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Tota
1905	2,680	1,793	1,499	3,773	3,470	27,871	10,778	33,437	15,747	49,
1906	2,790	2,017	1,891	4,040	3,704	30,143	11,996	36,200	17,591	53,
1907	2,840	2,233	2,082	4,122	4,023	32,802	12,958	39,157	19,063	58,
1908	3,142	2,138	2,059	4,225	4,345	*35,306	*14,321	41,669	20,725	62
1909	3,396	2,104	2,309	4,221	4,477	37,547	15,613	43,872	22,399	66
1910	3,670	1,981	2,225	4,284	4,645	41,291	16,659	47,556	23,529	71
1911	3,843	2,033	2,406	4,277	4,694	45,775	18,320	52,085	25,420	77
1912	3,989	1,881	2,406	4,117	4,430	49,561	19,272	55,559	26,108	81
1913	4,322	1,892	2,405	3,976	4,442	52,023	19,467	57,891	26,314	84
1914	4,579	1,874	2,304	3,488	4,107	49,093	18,473	54,455	24,884	79

* Prior to 1908 the ages of hands up to 18 years only were collected. The form of return has now been altered so that the ages of persons between 1 21 years may be included, and are shown in the Tables dealing with age-groups of 1914.

The numbers of persons over 18 and under 21 years of age since 1903 are:—

	Males.	Females.
1908	5,496	5,329
1909	5,786	5,764
1910	6,163	6,191
1911	6,316	6 554
1912	6,314	6,650
1913	6,339	6,533
1914	5,591	5,837

TABLE IX.

Horse-power of Machinery used—1905-1914.

Year.	Steam.		Gas.		Electricity and other.		Total.	
	No. of Factories.	Horse-power.	No. of Factories.	Horse-power	No. of Factories.	Horse-power.	*No. of Factories.	Horse-po
1905	564	22,902	534	3,691	216	1,316	1,314	27,3
1906	548	26,013	554	3,956	338	2,669	1,440	32,6
1907	543	26,172	561	4,196	394	3,264	1,498	33,6
1908	539	29,071	578	4,390	481	4,052	1,598	37,5
1909	542	33,874	587	5,254	513	4,297	1,642	43,4
1910	518	36,829	708	10,247	888	9,833	2,114	56,9
1911	546	39,488	718	10,455	967	10,655	2,231	60,5
1912	502	49,500	737	10,861	1,446	16,768	2,673	77,1
1913	513	51,749	745	11,852	1,661	21,392	2,919	84,9
1914	504	36,157	719	11,886	‡2,068	‡26,983	3,291	75,0

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using po

‡ Including 43 factories using oil of 960 horse-power.

TABLE X.

Classification of Factories according to Number of Persons employed—1905-1914.

Year.	Number of Factories in which the number of hands employed are—															
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.
1905	721	923	496	202	85	91	44	29	43	18	17	6	2	1	2	...
1906	686	987	530	206	86	117	52	20	49	30	15	4	3	3	2	...
1907	553	1,117	557	216	92	111	49	34	58	17	20	6	4	2	3	1
1908	732	1,183	567	242	108	104	51	40	52	25	20	7	5	1	3	2
1909	781	1,303	615	247	129	119	49	42	47	30	17	8	2	2	3	2
1910	838	1,426	668	254	124	120	72	41	58	27	21	7	4	5	2	3
1911	919	1,468	641	296	129	136	76	50	53	28	21	11	4	5	3	3
1912	942	1,497	686	311	146	147	64	49	66	35	19	11	7	4	2	3
1913	1,193	1,554	705	294	151	145	78	42	69	36	26	12	6	6	3	2
1914	1,692	1,410	693	277	134	136	65	40	57	25	26	10	3	3	4	4

METROPOLITAN DISTRICT—*continued.*

TABLE XI.

Yearly Increase and Percentage of Increase of Persons employed in Age-groups—1905-1914.

Under 16 Years of Age.

Males.					Females.					Total.				
Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.	
	Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.
1,793	159	9·7	.....	.....	1,499	.....	.....	73	4·7	3,292	86	2·7	.....	.....
2,017	224	12·5	.....	.....	1,891	392	26·1	.....	.....	3,908	616	18·7	.....	.....
2,233	216	10·7	.....	.....	2,082	191	10·1	.....	.....	4,315	407	10·4	.....	.....
2,138	.....	.....	95	4·3	2,059	.....	.....	23	1·1	4,197	.....	.....	118	2·7
2,104	.....	.....	34	1·6	2,309	250	12·1	.....	.....	4,413	216	5·1	.....	.....
1,981	.....	.....	123	5·8	2,225	.....	.....	84	3·6	4,206	.....	.....	207	4·7
2,033	52	2·6	.....	.....	2,406	181	8·1	.....	.....	4,439	233	5·5	.....	.....
1,881	.....	.....	152	7·5	2,406	.....	.....	.....	.....	4,287	.....	.....	152	3·4
1,892	11	·6	.....	.....	2,405	.....	.....	1	·0	4,297	10	·0	.....	.....
1,874	.....	.....	18	·9	2,304	.....	.....	101	4·1	4,178	.....	.....	119	2·7

Between 16 and 18 Years of Age.

Males.					Females.					Total.				
Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.	
	Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.
3,773	263	7·5	.....	.....	3,470	168	5·1	.....	.....	7,243	431	6·3	.....	.....
4,040	267	7·2	.....	.....	3,704	234	6·7	.....	.....	7,744	501	6·9	.....	.....
4,122	82	2·0	.....	.....	4,023	319	8·6	.....	.....	8,145	401	5·2	.....	.....
4,225	103	2·5	.....	.....	4,345	322	8·0	.....	.....	8,570	425	5·2	.....	.....
4,221	.....	.....	4	·1	4,477	132	3·0	.....	.....	8,698	128	1·5	.....	.....
4,284	63	1·5	.....	.....	4,645	168	3·7	.....	.....	8,929	231	2·6	.....	.....
4,277	.....	.....	7	·2	4,694	49	1·1	.....	.....	8,971	42	·5	.....	.....
4,117	.....	.....	160	3·7	4,430	.....	.....	264	5·6	8,547	.....	.....	424	4·7
3,976	.....	.....	141	3·4	4,442	12	·0	.....	.....	8,418	.....	.....	129	1·4
3,488	.....	.....	488	12·2	4,107	.....	.....	335	7·5	7,595	.....	.....	823	9·7

Over 18 Years of Age.

Males.					Females.					Total.				
Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.	
	Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.
27,871	2,127	8·3	.....	.....	10,778	875	8·8	.....	.....	38,649	3,002	8·4	.....	.....
30,143	2,272	8·2	.....	.....	11,996	1,218	11·3	.....	.....	42,139	3,490	9·0	.....	.....
32,802	2,659	8·8	.....	.....	12,958	962	8·0	.....	.....	45,760	3,621	8·6	.....	.....
35,306	2,504	7·7	.....	.....	14,321	1,363	10·5	.....	.....	49,627	3,867	8·5	.....	.....
37,547	2,241	6·3	.....	.....	15,613	1,292	9·0	.....	.....	53,160	3,533	7·1	.....	.....
41,291	3,744	9·9	.....	.....	16,659	1,046	6·7	.....	.....	57,950	4,790	9·0	.....	.....
45,775	4,484	10·9	.....	.....	18,320	1,661	10·0	.....	.....	64,095	6,145	10·6	.....	.....
49,561	3,786	8·3	.....	.....	19,272	952	5·2	.....	.....	68,833	4,738	7·4	.....	.....
52,023	2,462	4·7	.....	.....	19,467	195	1·0	.....	.....	71,490	2,657	3·8	.....	.....
49,093	.....	.....	2,930	5·6	18,473	.....	.....	994	5·1	67,566	.....	.....	3,924	5·4

All Employees.

Males.					Females.					Total.				
Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.	
	Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.
33,437	2,549	8·3	.....	.....	15,747	970	6·6	.....	.....	49,184	3,519	7·7	.....	.....
36,200	2,763	8·3	.....	.....	17,591	1,844	11·7	.....	.....	53,791	4,607	9·4	.....	.....
39,157	2,957	8·2	.....	.....	19,063	1,472	8·4	.....	.....	58,220	4,429	8·2	.....	.....
41,669	2,512	6·4	.....	.....	20,725	1,662	8·7	.....	.....	62,394	4,174	7·2	.....	.....
43,872	2,203	5·3	.....	.....	22,399	1,674	8·1	.....	.....	66 271	3,877	6·2	.....	.....
47,556	3,684	8·4	.....	.....	23,529	1,130	5·0	.....	.....	71,085	4,814	7·2	.....	.....
52,085	4,529	9·5	.....	.....	25,420	1,891	8·0	.....	.....	77,505	6,420	9·0	.....	.....
55,559	3,474	6·7	.....	.....	26,108	688	2·7	.....	.....	81,667	4,162	5·4	.....	.....
57,891	2,332	4·0	.....	.....	26,314	206	·8	.....	.....	84,205	2,538	3·0	.....	.....
54,455	.....	.....	3,436	6·2	24,984	.....	.....	1,420	5·4	79,339	.....	.....	4,866	5·7

METROPOLITAN DISTRICT—*continued.*

Table XII.

Percentages of Persons of each Sex in Age-groups to total Persons employed, 1910–14.

Year.	Under 16 years.				Over 16 and under 18 years.				Over 18 years.				To
	Males.		Females.		Males.		Females.		Males.		Females.		
	No.	Per-centage.	No.	Per-centage.	No.	Per-centage.	No.	Per-centage.	No.	Per-centage.	No.	Per-centage.	
1910	1,981	2·8	2,225	3·1	4,284	6·1	4,645	6·5	41,291	58·1	16,659	23·4	7
1911	2,033	2·6	2,406	3·2	4,277	5·5	4,694	6·0	45,775	59·1	18,320	23·6	7
1912	1,881	2·3	2,406	3·0	4,117	5·0	4,430	5·4	49,561	60·7	19,272	23·6	8
1913	1,892	2·2	2,405	2·9	3,976	4·7	4,442	5·3	52,023	61·8	19,467	23·1	8
1914	1,874	2·4	2,304	2·9	3,488	4·4	4,107	5·1	49,093	61·9	18,473	23·3	7

Table XIII.

Number of Persons employed in each Class, 1914.

Class of Factory.	Number of Factories on Register.	Hands Employed.									
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		Over 21 years.		Total.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
I. Treating raw materials, product of pastoral pursuits	138	19	...	85	6	133	4	1,544	19	1,781	29
II. Oils and fats—animal, vegetable, &c.	25	29	10	36	23	95	53	433	58	593	144
III. Processes in stone, clay, glass, &c.	190	68	1	182	1	378	11	3,938	19	4,566	32
IV. Working in wood	386	141	1	281	...	457	3	3,313	18	4,192	22
V. Metal works, machinery, &c.	512	329	12	860	29	1,406	52	8,260	32	10,855	125
VI. Connected with food and drink, &c.	760	399	330	527	644	862	863	6,646	1,396	8,434	3,233
VII. Clothing and textile fabrics, &c.	1,085	283	1,542	363	2,598	525	3,783	4,586	8,570	5,757	16,493
VIII. Books, paper, printing, and engraving, &c.	311	250	264	309	467	425	544	3,099	798	4,083	2,073
IX. Musical instruments, &c.	16	10	...	28	3	41	3	267	11	346	17
X. Arms and explosives	8	3	...	6	1	7	2	25	...	41	3
XI. Vehicles and fittings, saddlery and harness, &c.	274	71	4	205	12	344	16	1,991	36	2,611	68
XII. Ship and boat building, &c.	31	18	1	86	...	144	...	1,702	2	1,950	3
XIII. Furniture, bedding, &c.	267	108	27	228	54	311	101	2,485	249	3,132	431
XIV. Drugs, chemicals, and by-products	88	38	62	50	130	57	156	541	202	686	550
XV. Surgical and other scientific instruments	21	2	...	8	2	9	5	72	11	91	18
XVI. Jewellery and plated-ware, &c.	63	16	3	42	5	83	12	428	28	569	48
XVII. Heat, light, and power	137	24	...	97	..	162	...	3,221	...	3,504	...
XVIII. Leatherware, n.e.i.	27	30	9	41	24	65	22	283	50	419	105
XIX. Minor wares, n.e.i.	240	36	38	54	108	87	207	668	1,137	845	1,490
Total	4,579	1,874	2,304	3,488	4,107	5,591	5,837	43,502	12,636	54,455	24,884

Table XIV.

Horse-power of Machinery used in each Class, 1914.

Class of Factory.	Steam.			Gas.			Electricity, &	
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-p
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.
I. Treating raw materials, product of pastoral pursuits	63	2,005	1,468	35	1,106	905	37	1,783
II. Oils and fats—animal, vegetable, &c.	14	976	668	2	99	70	4	87
III. Processes in stone, clay, glass, &c.	63	7,755	5,432	29	2,451	1,651	57	1,683
IV. Working in wood	103	4,889	4,411	86	1,168	926	166	6,033
V. Metal works, machinery, &c.	49	3,857	3,173	115	2,244	1,618	286	5,039
VI. Connected with food and drink, &c.	95	11,080	7,358	123	2,068	1,605	306	6,209
VII. Clothing and textile fabrics, &c.	18	1,695	1,348	74	1,412	1,172	387	2,038
VIII. Books, paper, printing, and engraving, &c.	6	1,243	1,016	66	1,068	853	224	3,752
IX. Musical instruments, &c.	1	1	1	1	75	75	7	176
X. Arms and explosives	...	...	.....	...	.....	.....	5	38
XI. Vehicles and fittings, saddlery and harness, &c.	11	197	161	43	314	237	126	983
XII. Ship and boat building, &c.	13	2,376	2,221	3	36	30	12	650
XIII. Furniture, bedding, &c.	7	215	189	22	477	371	155	1,910
XIV. Drugs, chemicals, and by-products	17	476	336	13	435	382	45	1,118
XV. Surgical and other scientific instruments	...	...	.....	...	.....	.....	18	34
XVI. Jewellery and plated-ware, &c.	...	...	.....	4	56	44	52	279
XVII. Heat, light, and power	24	30,924	27,672	62	1,964	1,655	56	1,213
XVIII. Leatherware, n.e.i.	4	237	140	4	109	101	18	93
XIX. Minor wares, n.e.i.	16	666	563	37	262	191	107	597
Total	504	68,592	36,157	719	15,314	11,886	2,068	33,986

METROPOLITAN DISTRICT—*continued.*

TABLE XV.

Classification of Factories according to Number of Persons employed—1914.

Class of Factory.	Number of Factories in which the number of persons employed are—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Treating raw material, product of pastoral pursuits	56	35	24	7	5	4	2	1	3	...	...	1	...	...	...	...	138
Oils and fats—animal, vegetable, &c.	7	7	4	2	1	1	1	...	1	...	...	...	1	...	...	...	25
Processes relating to stone, clay, glass, &c.	35	47	36	26	18	15	5	1	4	...	2	1	...	...	...	...	190
Working in wood	196	96	57	19	6	4	1	1	1	2	2	1	...	...	...	...	386
Metal works, machinery, &c.	177	149	88	35	14	15	8	10	7	2	4	1	...	1	...	1	512
Connected with food and drink, &c.	430	166	68	36	11	15	9	2	8	5	4	1	...	1	3	1	760
Clothing and textile fabrics, &c.	278	402	175	75	32	39	25	16	20	9	7	4	2	1	...	...	1,085
Books, paper, printing, engraving, &c.	102	84	57	17	12	20	4	3	6	3	2	1	...	...	...	...	311
Musical instruments, &c.	4	6	3	...	2	...	...	...	...	...	1	...	...	...	...	...	16
Arms and explosives	2	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8
Vehicles and fittings, saddlery, harness, &c.	87	117	43	14	5	4	2	...	1	...	1	...	...	...	...	...	274
Ship and boat building, &c.	6	6	7	5	...	1	1	2	1	1	...	...	...	..	...	1	31
Furniture, bedding, &c.	86	89	70	20	9	5	2	1	2	2	1	...	...	...	...	...	267
Drugs, chemicals, and by-products	24	36	18	3	2	1	1	1	1	1	...	...	...	...	...	...	88
Surgical and other scientific instruments	11	8	2	...	...	...	...	...	...	...	...	...	...	...	...	...	21
Jewellery and plated-ware, &c.	18	25	13	2	3	2	...	...	...	...	...	...	...	...	...	...	63
Heat, light, and power	90	23	5	4	4	4	3	...	1	...	1	...	...	...	1	1	137
Leatherware (excepting saddlery and harness)	6	8	7	1	1	2	...	1	1	...	...	...	...	...	...	...	27
Minor wares not elsewhere included	77	100	36	11	9	4	1	1	...	...	1	...	...	...	...	...	240
Total	1,692	1,410	693	277	134	136	65	40	57	25	26	10	3	3	4	4	4,579

TABLE XVI.

Number of Persons employed in each Class—1910–14.

Class of Factory.	1910.	1911.	1912.	1913.	1914.
Treating raw material, product of pastoral pursuits	2,417	2,286	1,945	2,241	1,810
Oils and fats—animal, vegetable, &c.	507	561	666	698	737
Processes relating to stone, clay, glass, &c.	3,352	4,197	4,177	4,653	4,598
Working in wood	3,668	4,155	4,518	4,435	4,214
Metal works, machinery, &c.	9,376	10,316	11,850	12,275	10,980
Connected with food and drink, &c.	10,661	10,707	11,015	12,277	11,667
Clothing and textile fabrics, &c.	21,354	22,973	23,530	23,427	22,250
Books, paper, printing, engraving, &c.	5,643	5,986	6,405	6,752	6,156
Musical instruments, &c.	394	409	422	390	363
Arms and explosives	21	26	33	37	44
Vehicles and fittings, saddlery, harness, &c.	2,375	2,748	2,756	2,896	2,679
Ship and boat building, &c.	1,475	1,704	2,134	1,904	1,953
Furniture, bedding, &c.	3,131	3,655	3,994	4,080	3,563
Drugs, chemicals, and by-products	1,267	1,329	1,152	1,293	1,236
Surgical and other scientific instruments	94	113	105	107	109
Jewellery and plated-ware, &c.	688	771	782	716	617
Heat, light, and power	1,869	2,508	2,810	2,810	3,504
Leatherware (excepting saddlery and harness)	400	475	484	535	524
Minor wares not elsewhere included	2,303	2,595	2,889	2,679	2,335
Total	71,085	77,505	81,667	84,205	79,339

TABLE XVII.

Increase or decrease in number of Factories and of Persons employed—1905–14.

Yr.	Factories.		Persons employed.													
			Under 16 years.				Over 16 years and under 18 years.				* Over 18 years.				Total.			
	Gain.	Loss.	Gain.		Loss.		Gain.		Loss.		Gain.		Loss.		Gain.		Loss.	
			M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
.....	153	...	74	220	...	...	194	468	....	...	81	625	...	...	349	1,313	...	...
.....	97	...	159	...	...	73	263	168	...	...	2,127	875	...	...	2,549	970	...	...
.....	110	...	224	392	...	...	267	234	...	...	2,272	1,218	...	...	2,763	1,844	...	...
.....	50	...	216	191	...	...	82	319	...	...	2,659	962	...	...	2,957	1,472	...	...
.....	302	...	...	...	95	23	103	322	...	...	2,504	1,363	...	...	2,512	1,662	...	...
.....	254	...	...	250	34	...	..	132	4	...	2,241	1,202	...	...	2,203	1,674	...	...
.....	274	...	...	...	123	84	63	168	...	...	3,744	1,046	...	...	3,684	1,130	...	...
.....	173	...	52	181	...	...	...	49	7	...	4,484	1,661	...	...	4,529	1,891	...	...
.....	146	...	...	..	152	..	..	...	160	264	3,786	952	..	..	3,474	688	...	...
.....	333	...	11	..	..	1	...	12	141	...	2,461	195	...	...	2,332	206	...	...
....	257	...	...	...	18	101	...	...	488	335	...	...	2,930	994	...	...	3,436	1,430

* See foot-note to Table VIII.

METROPOLITAN DISTRICT—*continued.*

TABLE XVIII.

Number of Persons Employed in some of the most important Industries—1910–14.

Class of Factory.	1910.	1911.	1912.	1913.	1914.	Class of Factory.	1910.	1911.	1912.	1913.
Boiling-down	188	230	159	252	149	Boots and shoes—Factory made	3,774	3,695	3,696	3,603
Tanneries	832	867	693	730	743	Clothing—Men's slops	3,365	3,778	3,523	3,103
Wool-scouring and fellmongering	1,009	874	839	952	660	Women's slops	1,572	1,592	2,084	2,311
Soap and candles	381	333	369	372	403	Tailoring	2,801	3,371	3,437	3,917
Bricks and tiles	1,577	2,144	1,977	2,171	2,016	Dressmaking—				
Glass bottles	641	783	783	811	850	Makers' materials	2,982	3,147	2,818	2,573
Pottery and earthenware	324	334	470	427	382	Customers' materials	1,370	1,244	1,172	1,234
Boxes and packing cases	516	529	511	614	532	Hats and caps	1,304	1,478	1,515	1,428
Joinery	1,447	1,510	1,708	1,585	1,759	Oilskins and waterproofs	115	67	154	94
Saw-mills—Timber	1,132	1,487	1,701	1,593	1,358	Shirts, ties, and scarfs	1,374	1,548	1,693	1,609
Brass and copper works	445	405	572	487	462	Underclothing	876	1,157	1,027	891
Engineering	3,628	4,020	4,573	4,785	4,467	Rope and twine	199	202	269	240
Ironworks and foundries, &c.	912	1,087	1,272	1,279	1 217	Paper bags and boxes	709	709	754	661
Railway carriage-works	900	1,068	1,355	1,448	1,097	Paper-mills	169	152	138	241
Tin-smithing	1,023	980	954	914	822	Printing, bookbinding, &c.	4,171	4,479	4,793	5,152
Wire-works	473	509	532	535	490	Pianos and sewing-machines	394	400	422	390
Meat-preserving	1,175	1,158	1,018	1,387	1,223	Coaches and waggons	1,050	1,187	1,171	1,272
Biscuits	818	989	950	1,098	993	Cycles and motor cars	607	782	872	939
Bread and pastry	1,845	1,417	1,598	1,657	1,637	Saddlery and harness	544	586	505	482
Confectionery	716	710	747	815	785	Docks and slips	1,070	1,278	1,561	1,183
Flour-mills	257	258	212	263	217	Ship and boat building	380	401	542	679
Jam and fruit preserving	391	399	474	523	456	Bedding, flock, and upholstery	615	748	805	1,009
Sugar-refining	713	557	547	624	692	Furniture—European	897	1,080	1,338	1,415
Aerated waters and cordials	531	658	696	711	523	Chinese	756	841	862	749
Breweries	522	707	761	792	711	Chemical works and drugs	853	894	839	857
Condiments, coffee, and spices	535	610	654	711	506	Electric light and power	194	246	263	292
Ice and refrigerating	527	517	482	653	496	Jewellery	555	634	620	558
Tobacco, cigars, and cigarettes	1,364	1,377	1,418	1,480	1,738	Gas-works	1,340	1,653	1,734	1,668
Woollen-mills	712	799	841	1,020	1,058	Laundries—European	1,656	1,627	1,888	1,744
						Chinese	24	24	29	31

TABLE XIX.

Number of Factories on Register, and Persons employed in each Trade—1914.

Class of Factory.	Number of Factories on Register.	Persons employed.									
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
CLASS 1.—TREATING RAW MATERIAL, THE PRODUCT OF PASTORAL PURSUITS.											
1. *Animal Products.*											
Boiling-down and tallow-refining	11	...	.....	1	.....	5	.....	143	.....	149	.....
Glue	1	4	.....	1	.....	...	1	15	8	20	9
Tanneries	67	7	.....	30	.....	61	.....	645	.....	743	.....
Wool-scouring and fellmongering	20	2	.....	29	.....	49	.....	580	.....	660	.....
Other animal products	15	5	.....	21	6	17	3	108	10	151	19
Total, Sub-class 1	114	18	.....	82	6	132	4	1,500	18	1,723	28
2. *Vegetable Products.*											
Chaff-cutting	24	1	.....	3	.....	1	.....	53	1	58	1
Total, Class 1	138	19	.....	85	6	133	4	1,544	19	1,781	29
CLASS 2.—OILS AND FATS—ANIMAL AND VEGETABLE.											
Oil and grease	12	12	.....	23	.....	45	.....	253	1	333	1
Soap, candles, &c.	13	17	10	13	23	50	53	180	57	260	143
Total, Class 2	25	29	10	36	23	95	53	433	58	593	144
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &C.											
Asphalt	8	...	.....	...	.....	1	.....	44	.....	45	.....
Bricks and tiles	66	21	.....	39	.....	71	4	1,868	13	1,999	17
Glass and glass bottles	10	14	.....	69	.....	167	.....	600	.....	850	.....
Glass (ornamental)	21	10	.....	24	.....	27	1	187	.....	248	1
Lime, plaster, and cement	1	...	.....	...	.....	6	.....	132	.....	138	.....
Marble and slate	9	1	.....	3	.....	3	.....	132	.....	139	.....
Modelling and fibrous plaster	16	7	.....	12	.....	27	.....	80	.....	126	.....
Monumental masonry	22	2	.....	3	.....	7	.....	124	.....	136	.....
Pottery and earthenware	14	13	1	21	1	48	6	286	6	368	14
Stone-dressing	20	...	.....	7	.....	21	.....	447	.....	475	.....
Other works	3	...	.....	4	.....	...	.....	38	.....	42	.....
Total, Class 3	190	68	1	182	1	378	11	3,938	19	4,566	32

METROPOLITAN DISTRICT—*continued.*

TABLE XIX—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
ss 4.—Working in Wood.												
rcs, &c.	2	...	.....	...	.....	1	.....	5	.....	6	.....	6
and packing-cases	36	22	.....	28	.....	69	.....	403	10	522	10	532
rage ...	11	4	.....	14	.....	17	.....	161	8	196	8	204
y	166	65	1	175	.....	202	3	1,313	.....	1,755	4	1,759
ills—Timber	63	43	.. ...	53	.....	130	.....	1,132	.. ...	1,358	.....	1,358
Firewood	68	3	.....	...	.....	10	.....	140	.....	153	.....	153
turning	28	3	.....	8	.....	17	.....	88	.....	116	.....	116
works	12	1	.....	3	.....	11	.....	71	.....	86	.....	86
Total, Class 4	386	141	1	281	.....	457	3	3,313	18	4,192	22	4,214
Class 5.—Metal Works, Machinery, &c.												
ltural implements	15	12	.....	24	.....	32	.....	225	.....	293	.....	293
nd copper	31	14	.....	32	.....	68	1	346	1	460	2	462
y	14	2	.....	...	.....	1	.....	42	1	45	1	46
ering	155	97	.....	375	.....	582	.....	3,413	.....	4,467	.....	4,467
ized iron	22	10	.....	23	.....	31	.....	274	4	338	4	342
works, foundries, and boiler-aking	88	17	.....	66	.....	96	.....	1,038	.....	1,217	.....	1,217
fes and doors	3	...	.....	2	.....	1	.....	11	.....	14	.....	14
ills	2	...	.....	...	.....	...	.....	15	.....	15	.....	15
y carriage works	4	41	.....	108	.....	151	.....	795	2	1,095	2	1,097
ag and ore dressing	6	...	.....	1	.....	1	.....	15	.....	17	... ..	17
and ovens	14	13	.....	19	.....	50	.....	334	.....	416	.....	416
ithing	21	56	12	56	27	159	49	443	20	714	108	822
orking	13	27	.....	46	.....	51	2	363	1	487	3	490
metal works	54	25	.....	66	2	120	.....	572	2	783	4	787
ers	38	14	.....	34	.. ...	54	.....	275	1	377	1	378
ts	32	1	.....	8	.....	9	.....	99	.....	117	.....	117
Total, Class 5	512	329	12	860	29	1,406	52	8,260	32	10,855	125	10,980
6.—Connected with Food Drink, and the Preparation eof.												
1. *Animal Food.*												
	9	...	.....	2	.....	4	.....	82	.....	88	.....	88
rs' small-goods	130	5	.....	4	.....	11	.....	344	.....	364	.....	364
ine	3	...	.. ...	1	.....	6	.....	44	.....	51	.....	51
reserving	9	17	2	44	16	71	47	955	71	1,087	136	1,223
Total, Sub-class 1	151	22	2	51	16	92	47	1,425	71	1,590	136	1,726
table Foods, including Products ood, but usually connected with anufacture of Foods.												
	9	117	87	70	156	33	168	188	174	408	585	993
nd pastry	311	15	7	85	18	147	36	1,296	33	1,543	94	1,637
ionery	74	51	61	41	89	42	113	273	115	407	378	785
ur and oatmeal	7	...	8	4	15	9	25	110	39	123	87	210
ills	13	...	.....	7	.....	21	.....	219	.....	247	.....	247
l fruit preserving	11	6	10	11	17	46	42	160	164	223	238	456
sauces, and vinegar	13	6	5	7	8	12	20	68	80	93	113	206
foods and dog biscuits	2	2	.....	4	.....	2	.....	2	1	10	1	11
ing flour	8	...	1	4	4	4	11	17	20	25	36	61
efining	1	15	9	29	10	51	16	552	10	647	45	692
Total, Sub-class 2	449	212	188	262	317	367	431	2,885	636	3,726	1,572	5,298
Drinks and Stimulants.												
waters and cordials	40	8	2	48	8	103	24	298	32	457	66	523
es	5	...	.....	24	.....	116	.....	571	.....	711	.....	711
nts, coffee, spices, &c.	25	25	26	14	67	21	71	151	131	211	295	506
y	1	...	.....	...	.....	...	.....	35	.....	35	.....	35
refrigerating	33	6	.....	9	.....	13	.....	468	.....	496	.....	496
ding and packing	21	53	13	30	32	32	28	113	47	228	120	348
pirits, and beer bottling	20	...	.....	29	6	52	18	145	36	226	60	286
Total, Sub-class 3	145	92	41	154	113	337	141	1,781	246	2,364	541	2,905
4. *Narcotics.*												
, cigars, and cigarettes	15	73	99	60	193	66	244	555	443	754	984	1,738
Total, Class 6	760	399	330	527	644	862	863	6,646	1,396	8,434	3,233	11,667

METROPOLITAN DISTRICT—*continued.*

TABLE XIX—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.									
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.											
1. *Textile.*											
Woollen mills	4	29	93	42	102	56	113	349	274	476	582
2. *Dress.*											
Boots and shoes :—Order made	93	21	1	16	3	21	4	267	18	325	26
Factory made	81	117	172	78	243	109	319	1,807	719	2,111	1,453
Clothing :—Men's slops	56	28	329	31	447	66	628	509	1,070	634	2,474
Women's slops	58	7	110	12	193	18	394	83	1,182	120	1,879
Tailoring	253	18	115	32	267	80	467	876	1,592	1,006	2,441
Corsets	6	...	5	...	6	...	19	4	53	4	83
Dressmaking and millinery :—											
Makers' material	197	...	136	...	209	...	246	...	508	...	1,099
Customers' material	134	...	267	...	467	2	591	14	1,228	16	2,553
Dye works	16	...	...	3	6	4	6	42	33	49	45
Furriers	4	...	2	1	3	2	8	10	29	13	42
Hats and caps	37	32	61	45	193	87	277	302	457	466	988
Hosiery and knitting	14	3	19	1	48	2	72	21	129	27	268
Oilskin and waterproof clothing	4	1	4	1	8	...	8	11	32	13	52
Shirts, ties, and scarfs	42	8	144	10	225	12	361	72	770	102	1,500
Umbrellas	6	5	4	1	13	4	20	30	38	40	75
Underclothing	45	2	46	...	123	...	192	13	337	15	698
Wigs and hair work	9	...	3	...	5	...	7	7	17	7	32
Total, Sub-class 2	1,055	242	1,418	231	2,459	407	3,619	4,068	8,212	4,948	15,708
3. *Fibrous Materials and Textiles not elsewhere included.*											
Bags and sacks	7	4	28	4	26	2	28	36	34	46	116
Rope and twine	9	6	.....	81	2	49	3	95	4	231	9
Tents and tarpaulins	10	2	3	5	9	11	20	38	46	56	78
Total, Sub-class 3	26	12	31	90	37	62	51	169	84	333	203
Total, Class 7	1,085	283	1,542	363	2,598	525	3,783	4,586	8,570	5,757	16,493
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.											
Die-sinking and engraving	8	3	.....	6	.....	6	.....	31	4	46	4
Electrotyping and stereotyping, type founding, and printers' materials.	8	3	2	10	3	13	1	43	7	69	13
Paper bags and boxes	14	19	55	11	101	26	117	108	149	164	422
Paper mills, cardboard, and straw board	5	5	7	6	6	4	14	152	14	167	41
Photo.-engraving, photo.-lithography, and photo. materials	35	12	11	12	24	23	49	199	146	237	230
Printing, bookbinding, and manufacturing stationery	241	208	189	264	333	353	363	2,575	478	3,400	1,363
Total, Class 8	311	250	264	309	467	425	544	3,099	798	4,033	2,073
CLASS 9.—MUSICAL INSTRUMENTS, &C.											
Pianos, organs, and sewing-machines	16	10	.....	28	3	41	3	267	11	346	17
CLASS 10.—ARMS AND EXPLOSIVES.											
Explosives	3	3	.....	6	1	7	2	25	.....	41	3
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY, HARNESS, &C.											
Coaches and waggons	118	28	.....	87	.....	152	.....	990	.....	1,257	.....
Cycles and motor cars	107	31	1	94	2	124	3	576	6	825	12
Perambulators, &c.	4	1	.....	6	.....	6	1	41	1	54	2
Saddlery, harness, &c.	32	9	3	17	10	39	11	309	27	374	51
Naves, spokes, &c.	6	...	.....	1	.....	20	.....	54	.....	75	.....
Whips	7	2	.....	...	.....	3	1	21	2	26	3
Total, Class 11	273	71	4	205	12	344	16	1,991	36	2,611	68
CLASS 12.—SHIPBUILDING, FITTINGS, &C.											
Docks and slips	4	10	.....	53	.....	99	.....	1,127	.....	1,289	.....
Sailmaking	5	...	1	3	.....	3	.....	29	2	35	3
Ship and boat building	22	8	.....	30	.....	42	.....	546	.....	626	.....
Total, Class 12	31	18	1	86	.....	144	.....	1,702	2	1,950	3

METROPOLITAN DISTRICT—*continued.*

TABLE XIX.—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
—FURNITURE, BEDDING, &c.												
flock, and upholstery	46	26	19	47	34	73	66	425	152	571	271	842
ewing	6	2	7	4	18	5	27	71	75	82	127	209
steads	5	13	.....	17	.....	25	.....	218	.. ...	273	.....	273
ables	3	...	.....	8	.....	7	.....	52	.....	67	.....	67
king	9	3	.....	3	... ..	10	.....	80	1	96	1	97
e and cabinet making—												
pean	101	43	.....	130	.....	165	.....	875	2	1,213	2	1,215
ese	59	...	.....	2	.....	3	... ..	567	.....	572	.....	572
boo and wicker	12	10	.....	4	.....	8	.. ...	84	.....	106	.....	106
rames	21	10	1	10	2	11	7	72	19	103	29	132
blinds	5	1	.....	3	.....	4	1	41	.....	49	1	50
Total, Class 13	267	108	27	228	54	311	101	2,485	249	3,132	431	3,563
—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
owder, blue, soda, &c.	14	4	25	3	38	2	26	40	28	49	117	166
works and drugs	48	27	32	39	84	40	127	329	167	435	410	845
s	8	...	.....	1	.....	3	.....	105	.. ...	109	.....	109
and essences	2	3	3	3	4	3	1	2	4	11	12	23
d varnishes	16	4	2	4	4	9	2	65	3	82	11	93
Total, Class 14	88	38	62	50	130	57	156	541	202	686	550	1,236
—SURGICAL AND SCIENTIFIC APPLIANCES.												
struments	15	1	.....	6	.....	9	3	51	4	67	7	74
nstruments	6	1	.....	2	2	...	2	21	7	24	11	35
Total, Class 15	21	2	.....	8	2	9	5	72	11	91	18	109
—TIME-PIECES, JEWELLERY, ND PLATED WARE.												
ting	13	5	.....	11	1	13	1	104	4	133	6	139
.....	50	11	3	31	4	70	11	324	24	436	42	478
Total, Class 16	63	16	3	42	5	83	12	428	28	569	48	617
—LIGHT, HEAT, AND POWER.												
apparatus	30	15	.....	49	.....	87	.....	186	.....	337	.....	337
light and power works	*85	1	.....	5	.....	10	... ..	282	... ..	298	.....	*298
.....	8	1	.....	25	.....	51	.....	2,394	.....	2,471	.....	2,471
l gas mantles	4	3	.. ...	5	.....	3	.....	43	.....	54	.....	54
power	1	...	.....	...	.....	...	.....	13	.....	13	.....	13
s	10	4	.....	13	.....	11	.....	305	.....	333	.....	333
Total, Class 17	137	24	.....	97	.....	162	.....	3,221	.....	3,504	.....	3,504
—LEATHERWARE (EXCEPTING NESS AND SADDLERY).												
her	11	10	.....	11	6	11	1	101	19	133	26	159
lting	3	3	.....	4	.....	18	.....	48	.....	73	.....	73
aus	13	17	9	26	18	36	21	134	31	213	79	292
Total, Class 18	27	30	9	41	24	65	22	283	50	419	105	524
—MINOR WARES NOT ELSEWHERE INCLUDED.												
ickerware, mats, matting	5	...	.....	...	.....	2	.....	34	.....	36	.....	36
rushes	15	12	1	16	1	13	2	104	7	145	11	156
d seedsmen	5	2	1	2	7	2	10	9	13	15	31	46
-European	†156	1	28	5	86	6	172	135	1,066	147	1,352	1,499
Chinese	16	...	... ..	...	.....	...	.....	31	1	31	1	32
ods	5	6	6	14	10	25	19	159	46	204	81	285
.....	10	2	.....	...	.....	2	.....	22	.....	26	.....	26
nd sign-writing	10	1	.....	12	.....	12	.....	87	.....	112	... ..	112
or Works	18	12	2	5	4	25	4	87	4	129	14	143
Total, Class 19	240	36	38	54	108	87	207	668	1,137	845	1,490	2,335

* These figures include 72 electric lighting plants for picture shows, employing 84 hands.

ritable institutions doing outside laundry work are now included in the number of factories registered. The persons engaged in laundry work in these institutions at the end of 1914, are, however, not included in the number of hands employed in laundries

METROPOLITAN DISTRICT—*continued.*

TABLE XX.

Horse-power of Machinery used in each Trade, 1914.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actu use
CLASS 1.—TREATING RAW MATERIALS, &c.									
Boiling-down and tallow refining	7	283	205	1	120	70	5	146	1
Glue	...	.....	.....	...	.....	.....	1	56	
Tanneries	41	711	560	20	532	412	7	64	
Woolscouring and fellmongering and packing skins	12	879	645	3	368	360	15	1,379	9
Chaff-cutting	3	132	58	11	86	63	9	138	1
Total	63	2,005	1,468	35	1,106	905	37	1,783	1,2
CLASS 2.—OILS AND FATS.									
Oil and grease	7	148	126	2	99	70	2	36	
Soap and candles	7	828	562	...	.....	.....	2	51	
Total	14	976	688	2	99	70	4	87	
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.									
Asphalt	2	100	70	...	...	...	3	57	
Bricks and tiles	43	6,884	4,747	12	2,056	1,341	11	669	4
Glass and glass bottles	1	30	24	1	9	4	6	122	1
Glass (ornamental)	2	20	9	1	10	10	10	86	
Marble and slate	1	20	15	3	82	62	5	102	
Modelling and fibrous plaster	...	.....	.....	1	4	2	8	39	
Monumental masons	...	.....	.....	2	36	24	2	28	
Pottery and earthenware	6	401	303	4	53	40	2	102	
Stone-dressing	7	288	254	4	66	53	9	461	
Other works	1	12	10	1	135	115	1	17	
Total	63	7,755	5,432	29	2,451	1,651	57	1,683	1,
CLASS 4.—WORKING IN WOOD.									
Incubators	...	.....	.....	2	13	7	...	.....	
Boxes and packing-cases	2	405	330	7	160	136	30	1,012	
Cooperage	3	105	100	2	86	66	3	41	
Joinery	11	1,110	1,051	52	651	507	82	1,254	1,
Saw-mills—timber	37	2,695	2,473	4	116	103	22	3,501	2,
,, firewood	48	514	407	8	79	59	6	35	
Wood-turning	1	20	10	5	18	16	20	162	
Other works	1	40	40	6	45	32	3	28	
Total	103	4,889	4,411	86	1,168	926	166	6,033	4
CLASS 5.—METAL WORKS, MACHINERY, &c.									
Agricultural implements	...	...	...	6	82	62	5	55	
Brass and copper	3	284	104	7	60	43	19	125	
Cutlery	...	.....	.....	1	8	8	14	111	
Engineering	24	2,469	2,168	46	649	508	105	2,427	2
Galvanized iron	2	16	14	3	32	25	8	99	
Iron works, foundries, and boiler-making	12	454	375	23	458	321	52	957	
Iron safes and doors	...	.....	.....	...	.....	.....	1	9	
Lead-mills	1	100	90	1	5	3	1	40	
Railway carriage works	3	386	297	2	232	114	2	11	
Smelting and ore-dressing	1	12	6	1	4	4	2	48	
Stoves and ovens	...	.....	.....	7	171	131	5	104	
Tinsmithing	1	8	8	6	108	72	6	38	
Wire-working	...	.....	.....	1	40	36	11	518	
Other metal works	1	120	105	8	387	283	38	451	
Plumbers	...	.....	.....	2	4	4	5	17	
Farriers	1	8	6	1	4	4	12	20	
Total	49	3,857	3,173	115	2,244	1,618	286	5,030	
CLASS 6.—CONNECTED WITH FOOD AND DRINK, &c.									
Bacon	5	209	186	...	...	...	5	70	
Butchers' small-goods	12	312	227	49	320	235	87	626	
Margarine	3	50	40	1	52	40	2	71	
Meat-preserving	7	917	833	1	31	26	6	173	
Biscuits	3	585	362	2	26	26	4	116	
Bread and pastry	1	1	1	27	246	172	63	533	
Confectionery	5	79	70	4	98	94	32	397	
Corn-flour and oatmeal	3	195	155	3	33	28	5	255	
Flour-mills	9	1,945	1,543	2	208	150	3	76	
Jam and fruit preserving	5	61	56	...	...	.....	4	120	
Pickles, sauces, and vinegar	5	37	23	...	...	.....	5	19	
Dog biscuits and poultry foods	1	3	3	...	...	.....	1	5	
Self-raising flour	...	...	.....	1	2	2	5	47	
Sugar	1	496	327	...	...	.....	1	1,250	
Aerated waters	13	60	36	11	76	57	17	296	
Breweries	3	2,613	1,339	2	17	10	3	415	
Condiments, Eastern goods, &c.	3	445	403	4	44	36	17	241	
Distillery	1	51	37	...	.....	.....	...	.....	
Ice and refrigerating	13	2,959	1,669	12	838	664	15	487	
Tea-blending	1	50	40	2	22	22	16	130	
Tobacco cigars, and cigarettes	...	.....	.....	...	...	.....	9	776	3
Wines and spirits	2	12	8	2	55	43	6	106	
Total	95	11,080	7,358	123	2,068	1,605	306	6,209	5

METROPOLITAN DISTRICT—*continued.*

TABLE XX—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, &c.									
llen mills	4	775	675	2	220	186	1	150	150
s and shocs	1	100	50	49	729	589	105	489	389
ing—men's slops	...	... ..	.....	2	18	12	46	178	173
,, women's slops	...	.....	.....	1	3	3	43	129	120
,, tailoring	...	.....	.....	...	.....	.....	45	67	61
ts	...	.....	.....	...	.....	.....	4	10	9
making	...	.....	.....	...	.....	.....	20	64	61
works	5	29	17	2	8	8	2	9	6
ers	...	.....	.....	1	1	1	2	9	5
and caps	7	571	386	5	32	28	28	325	295
ry, knitting, &c.	...	.....	.....	1	24	6	12	59	52
ins and waterproof clothing	...	.....	.....	...	.....	.....	4	24	19
s, ties, and scarfs	...	.....	.....	4	52	44	28	166	148
ellas	...	.....	.....	...	.....	.....	5	15	14
relothing	...	.....	.....	1	3	3	29	73	67
and sacks	...	.....	.....	...	.....	.....	2	77	40
and twine	1	220	220	5	312	284	3	167	47
and tarpaulins	...	.....	.....	1	10	8	8	27	25
Total	18	1,695	1,348	74	1,412	1,172	387	2,038	1,681
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.									
nking and engraving	...	.....	.....	1	3	2	6	24	22
o- and stereo-typing, printers' materials, &c.	...	.....	.....	1	2	2	7	137	110
bags and boxes	2	123	87	4	64	54	9	141	126
-mills	2	1,105	915	...	.....	.....	2	32	23
-engraving, photo materials, &c.	...	.....	.....	...	.....	.....	15	127	106
ng, bookbinding, and stationery	2	15	14	60	999	795	185	3,291	2,630
Total	6	1,243	1,016	66	1,068	853	224	3,752	3,017
CLASS 9.—MUSICAL INSTRUMENTS, &c.									
s and sewing-machines	1	1	1	1	75	75	7	176	173
CLASS 10.—ARMS AND EXPLOSIVES.									
sives	..	.....	.....	...	.....	.....	5	38	21
CLASS 11.—VEHICLES, SADDLERY, HARNESS, &c.									
es and waggons	4	68	40	13	133	115	37	480	440
and motor-cars	1	8	8	28	170	111	68	318	267
bulators	...	.....	.....	1	3	3	3	10	10
ry and harness	...	.....	.....	...	.....	.....	13	55	48
and spokes	5	115	107	1	8	8	5	120	80
	1	6	6	...	.....	.....	...	.....	.....
Total	11	197	161	43	314	237	126	983	845
CLASS 12.—SHIPBUILDING, &c.									
and slips	4	2,012	2,012	...	.....	.....	1	200	100
king	...	.....	.....	...	.....	.....	1	4	4
d boat building	9	364	209	3	36	30	10	426	356
Total	13	2,376	2,221	3	36	30	12	630	460
CLASS 13.—FURNITURE, BEDDING, &c.									
g and flock	5	111	85	3	79	66	25	524	466
sewing	...	.....	.....	1	10	8	2	11	9
dsteads	...	.....	.....	...	.....	.....	4	206	154
-tables	...	.....	.....	2	23	20	2	26	19
naking	..	.....	.....	1	8	4	7	74	61
ire—European	2	104	104	15	357	273	70	758	694
Chinese	...	.....	.....	...	.....	.....	24	220	181
Bamboo and Wicker	...	.....	.....	...	.....	.....	3	28	28
frames	...	.....	.....	...	.....	.....	16	46	46
v blinds	...	.....	.....	...	.....	.....	2	17	10
Total	7	215	189	22	477	371	155	1,910	1,668
ASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.									
aking-powder, soda, &c.	1	12	12	3	150	126	9	140	119
al works and drugs	9	280	192	4	172	148	22	771	645
ers	6	124	107	...	.....	.....	3	79	71
es and essences	...	... .	.....	...	.....	.....	1	2	1
nd varnish	1	60	25	6	113	108	10	126	123
Total	17	476	336	13	435	382	45	1,118	959
ss 15.—SURGICAL AND SCIENTIFIC APPLIANCES.									
instruments	...	.....	.....	...	.....	.. ...	15	28	26
instruments	...	.....	.....	...	.....	.....	3	6	6
Total	...	.....	.....	...	... -	.....	18	34	32

METROPOLITAN DISTRICT—*continued.*

TABLE XX—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories	Horse-power.		No. of Factories.	Horse-power	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actu us
CLASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.									
Electro-plating	...	.....	.....	4	56	44	13	120	1
Jewellery	...	.....	.....	...	.....	.....	39	159	1
Total	...	.....	.....	4	56	44	52	279	2
CLASS 17.—LIGHT, HEAT, AND POWER.									
Electrical apparatus	...	.....	.....	...	.....	.....	26	159	1
Electric light	9	28,040	25,515	57	1,695	1,429	22	906	7
Gas	6	1,004	739	4	259	220	1	43	
Lamps and gas mantles	...	.....	.....	1	10	6	3	13	
Hydraulic power	1	700	590	...	.....	.....	1	5	
Coke works	8	1,180	918	...	.....	.....	3	87	
Total	24	30,924	27,672	62	1,964	1,655	56	1,213	1,(
CLASS 18.—LEATHERWARE (EXCEPTING SADDLERY AND HARNESS).									
Fancy leather	3	137	90	3	95	87	6	32	
Leather belting	1	100	50	1	14	14	1	11	
Portmanteaux and bags	...	.....	.....	...	...	...	11	50	
Total	4	237	140	4	109	101	18	93	
CLASS 19.—MINOR WARES (NOT ELSEWHERE INCLUDED).									
Brooms and brushes	...	.....	.....	4	37	25	9	20	
Florists and seedsmen	...	.....	.....	1	11	8	2	18	
Laundries	15	266	163	29	188	143	75	582	
Rubber goods	1	460	400	...	.....	.....	5	226	
Toys	...	.....	.....	3	26	15	7	14	
Painting and signwriting	...	.....	.....	...	.....	.....	1	2	
Other minor works	...	.....	.....	...	.....	.....	8	35	
Total	16	666	563	37	262	191	107	897	

NOTE.—These figures include 2 steam plants using 415 h.-p., 52 gas plants using 798 h.-p., and 18 electric and oil plants using 225 h.-p., for lighting purpose Picture Shows.

NEWCASTLE DISTRICT RETURNS.

NOTE.—This District was proclaimed on 6th February, 1899, and was further extended on 1st August, 1904.

TABLE XXI.

Classification of Persons Employed, 1905–14.

Year.	Number of Factories on Register.	Persons employed.								
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	T
1905	464	204	182	408	320	2,948	595	3,560	1,097	4,
1906	483	256	236	426	360	3,090	675	3,772	1,271	5.
1907	495	249	284	435	441	3,337	726	4,021	1,451	5.
1908	507	256	222	427	436	3,306	693	3,989	1,351	5,
1909	498	205	100	377	310	3,125	656	3,707	1,066	4,
1910	524	263	98	430	265	3,258	748	3,951	1,111	5,
1911	569	274	117	446	278	3,570	782	4,290	1,177	5,
1912	589	239	145	411	303	3,784	1,290	4,434	1,290	5,
1913	572	234	163	415	280	3,988	903	4,637	1,346	5,
1914	583	158	123	388	247	3,806	769	4,348	1,129	5,

TABLE XXII.

Horse-power of Machinery used, 1905–14.

Year.	Steam.		Gas.		Electricity and other.		Total.	
	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	*No. of Factories.	Horse
1905	137	2,378	31	241	10	747	178	3,(
1906	140	3,102	31	205	10	843	181	4,(
1907	143	3,184	33	372	16	1,200	192	4,7
1908	152	3,413	37	219	24	1,703	213	5,(
1909	156	3,458	42	224	33	1,717	231	5,(
1910	154	4,275	47	304	56	2,325	257	6,(
1911	167	4,424	59	377	90	2,489	316	7,(
1912	176	4,420	66	451	109	1,792	351	6,(
1913	166	4,553	66	474	119	1,824	351	6,(
1914	145	4,700	76	541	132	3,313	353	8,(

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using po

NEWCASTLE DISTRICT—*continued.*

Table XXIII.

Classification of Factories according to Number of Persons employed, 1905–1914.

Year.	Number of Factories in which the number of persons employed are—														Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and over.	
.....	158	209	58	20	7	6	1	1	1	1	...	1	...	1	464
.....	183	202	56	22	9	5	...	1	2	1	...	...	1	1	483
.....	165	213	70	19	13	6	1	3	3	...	...	...	...	2	495
.....	169	224	64	22	9	11	2	...	3	1	..	1	1	...	507
.....	219	179	51	23	10	8	1	1	4	...	...	2	...	...	498
.....	228	191	60	17	9	8	4	...	3	2	...	2	...	...	524
.....	252	197	66	27	5	12	2	2	3	1	...	2	...	...	569
.....	270	203	53	29	13	12	1	1	1	3	1	2	...	...	589
.....	234	217	61	20	16	10	7	1	...	3	2	...	1	...	572
.....	290	172	57	26	13	12	5	3	...	3	2	...	...	..	583

Table XXIV.

Number of Persons Employed in each Class, 1914.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		16 years and under 18 years.		18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Treating raw materials, &c.	11	...	...	1	...	1	...	13	...	15	...	15
Oils and fats, animal and vegetable, &c. ...	4	7	...	15	3	17	13	181	5	220	21	241
Processes in stone, clay, and glass, &c. ...	33	1	...	21	...	24	...	291	...	337	...	337
Working in wood	71	19	...	45	...	70	...	525	...	659	...	659
Metal works, machinery, &c.....	56	47	...	127	...	139	...	891	...	1,204	...	1,204
Connected with food and drink, &c.....	188	34	10	88	23	91	43	566	71	779	147	926
Clothing and textile fabrics, &c.	94	13	103	22	175	22	239	204	324	257	831	1,088
Books, paper, printing, &c.	22	15	4	20	16	23	9	158	28	216	57	273
Musical instruments	...	...	...	...	...	...	...	...	...	...	...	...
Arms and explosives	1	...	...	...	2	...	2	3	...	3	4	7
Vehicles and fittings, saddlery and harness	37	11	...	22	...	31	...	166	...	230	...	230
Ship and boat building, &c.	6	...	...	5	...	2	...	41	1	48	1	49
Furniture, bedding, &c.	14	6	...	13	...	24	...	89	2	132	2	134
Drugs, chemicals, and by-products	1	...	...	...	...	...	...	5	...	5	...	5
Surgical and other scientific instruments...	1	...	...	1	...	...	...	1	...	2	...	2
Jewellery and plated-ware, &c.....	4	2	...	...	...	2	...	15	...	19	...	19
Heat, light and power	37	2	...	7	...	7	...	184	...	200	...	200
Leatherware, n.e.i.	...	...	...	...	...	...	...	...	...	...	...	...
Minor wares, n.e.i.	7	1	6	1	28	4	14	16	18	22	66	88
Total	583	158	123	388	247	457	320	3,319	449	4,348	1,129	5,477

Table XXV.

Horse-power of Machinery used in each Class, 1914.

Class of Factory.	Steam.		Gas.		Electricity.		Other.	
	No. of Factories.	Horse-power actually used.	No. of Factories.	Horse-power actually used.	No. of Factories.	Horse-power actually used.	No. of Factories.	Horse-power actually used.
Treating raw materials, product of pastoral pursuits	2	8	2	20	4	39	1	15
Oils and fats—animal, vegetable, &c.....	4	296	...	.....	...	.....	...	.....
Processes in stone, clay, glass, &c.....	19	574	2	14	3	75	4	4
Working in wood	41	981	5	35	7	170	6	38
Metal works, machinery, &c.	7	278	10	81	14	1,565	1	3
Connected with food and drink, &c.....	42	614	32	174	21	148	18	44
Clothing and textile fabrics, &c.....	...	.....	...	.....	15	34	...	.....
Books, paper, printing and engraving, &c.	1	5	10	80	5	30	1	2
Musical instruments, &c.	...	.....	...	.....	...	.....	...	.....
Arms and explosives	1	10	...	.....	...	.....	...	.....
Vehicles and fittings, saddlery and harness, &c.	9	163	2	29	5	16	3	14
Ship and boat building, &c.	4	69	1	2	...	.....	...	.....
Furniture, bedding, &c.	1	4	5	29	5	39	...	.....
Drugs, chemicals, and by-products	...	.. ...	...	.....	1	18	...	.....
Surgical and other scientific instruments	...	.....	2	1	...	.....	...	.....
Jewellery and plated-ware, &c.	...	.....	...	.....	1	4	...	.. ...
Heat, light and power	11	1,666	5	76	6	965	10	84
Leatherware, n.e.i.	...	.....	...	.....	...	.....	...	.. ...
Minor wares, n.e.i.	3	32	...	.....	1	6	...	.....
Total	145	4,709	76	541	88	3,109	44	204

NEWCASTLE DISTRICT—*continued.*

Table XXVI.

Classification of Factories according to Number of Persons employed, 1914.

Class of Factory.	Number of Factories in which the number of persons employed are—													T
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and over.	
I. Treating raw material, product of pastoral pursuits	11	...	...	...	...	...	...	...	...	...	...	...	...	...	
II. Oils and fats—animal, vegetable, &c.	...	2	...	...	...	...	...	1	...	1	...	...	...	...	
III. Processes relating to stone, clay, glass, &c.	9	12	4	6	2	...	...	...	...	...	...	...	...	...	
IV. Working in wood	26	29	8	3	1	2	2	...	...	...	...	...	...	...	
V. Metal work, machinery, &c.	24	18	5	2	1	2	...	1	...	1	2	...	...	...	
VI. Connected with food and drink, &c.	132	33	13	5	3	1	...	1	...	...	...	...	...	...	
VII. Clothing and textile fabrics, &c.	27	44	11	2	2	4	3	...	...	1	...	...	...	...	
VIII. Books, paper, printing, engraving, &c.	8	5	3	3	2	1	...	...	...	...	...	...	...	...	
IX. Musical instruments, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
X. Arms and explosives	...	1	...	..	...	...	...	...	...	..	...	...	...	...	
XI. Vehicles and fittings, saddlery, harness, &c.	15	15	6	1	...	...	...	...	...	...	...	...	...	..	
XII. Ship and boat building, &c.	2	2	1	1	...	...	...	...	...	...	...	...	...	...	
XIII. Furniture, bedding, &c.	5	5	2	1	...	1	...	...	...	...	...	...	...	...	
XIV. Drugs, chemicals, and by-products	...	1	...	...	...	...	...	...	...	...	...	...	...	...	
XV. Surgical and other scientific instruments	1	...	...	...	...	...	...	...	...	...	...	...	...	...	
XVI. Jewellery and plated-ware, &c.	1	3	...	...	...	...	...	...	...	...	...	...	...	...	
XVII. Heat, light and power	27	1	3	1	1	1	...	...	...	...	...	...	...	...	
XVIII. Leatherware (excepting saddlery and harness)	...	...	...	...	...	...	...	...	...	..	...	...	...	...	
XIX. Minor wares, n.e.i.	3	1	1	1	1	...	...	...	...	...	...	...	...	...	
Total	290	172	57	26	13	12	5	3	...	3	2	...	...	...	

Table XXVII.

Number of Persons employed in each Class, 1910-14.

Class of Factory.	1910.	1911.	1912.	1913.	191
I. Treating raw material, product of pastoral pursuits	25	24	23	19	
II. Oils and fats—animal, vegetable, &c.	166	241	262	238	
III. Processes relating to stone, clay, glass, &c.	204	272	341	441	
IV. Working in wood	591	617	573	630	
V. Metal works, machinery, &c.	1,130	1,155	1,310	1,361	1,
VI. Connected with food and drink, &c.	1,096	1,157	1,070	1,074	
VII. Clothing and textile fabrics, &c.	898	1,061	1,128	1,218	1,
VIII. Books, paper, printing, engraving, &c.	234	212	209	227	
IX. Musical instruments, &c.	.....	.....	.....	.....	
X. Arms and explosives	19	6	6	4	
XI. Vehicles and fittings, saddlery, harness, &c.	229	246	270	258	
XII. Ship and boat building, &c.	38	79	65	47	
XIII. Furniture, bedding, &c.	91	95	119	137	
XIV. Drugs, chemicals, and by-products	.....	.....	48	32	
XV. Surgical and other scientific instruments	.....	.....	2	2	
XVI. Jewellery and plated-ware, &c.	20	19	17	17	
XVII. Heat, light and power	253	218	194	188	
XVIII. Leatherware (excepting saddlery and harness)	.....	.....	.....	.....	
XIX. Minor wares, n.e.i.	68	65	87	90	
Total	5,062	5,467	5,724	5,983	5,

Table XXVIII.

Number of Persons employed in some of the most important Industries, 1910-14.

Class of Factory.	1910.	1911.	1912.	1913.	1914.	Class of Factory.	1910.	1911.	1912.	1913.
Soap and candles	166	241	175	178	161	Breweries	78	88	87	102
Bricks and tiles	126	165	194	291	210	Wine making	72	81	81	95
Pottery and earthenware	17	27	70	77	70	Tailoring	506	642	505	538
Joinery	212	196	214	227	207	Dressmaking, Makers' materials	238	266	296	278
Sawmills, timber	284	320	272	336	332	,, Customers' ,,	104	112	94	127
Engineering and bolts and nuts	598	641	662	737	661	Printing, bookbinding, &c.	210	212	185	197
Ironworks and foundries	57	52	66	59	50	Coaches and waggons	110	113	127	121
Smelting	346	333	396	421	311	Saddlery and harness	63	64	65	59
Biscuits	375	351	338	273	94	Ship and boat building	30	79	65	35
Bread and pastry	251	297	247	274	272	Furniture—European	84	73	96	110
Confectionery	54	48	46	47	48	Gasworks	165	136	88	87
Oil refining	...	96	87	60	80	Clothing—Men's slops	...	90	151	203
Aerated waters	109	121	106	103	96	Shirts	...	28	38	35

BROKEN HILL DISTRICT RETURNS.

NOTE.—This District was proclaimed on 1st March, 1903.

TABLE XXIX.

Classification of Persons Employed, 1914.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females	Total.
Treating raw materials, product of pastoral pursuits	1	...	.....	...	.....	...	.....	3	...	3	...	3
Oils and fats—animal, vegetable, &c.	2	...	.....	...	.....	1	.....	4	...	5	...	5
Processes in stone, clay, glass, &c.	2	...	.....	...	.....	4	.....	13	...	17	...	17
Working in wood	19	3	.....	8	.....	8	.....	73	...	92	...	92
Metal works, machinery, &c.	11	...	.....	8	.....	4	.....	92	...	104	...	104
Connected with food and drink, &c.	57	5	2	16	2	14	3	146	11	181	18	199
Clothing and textile fabrics, &c.	28	1	8	1	30	4	52	24	81	30	171	201
Books, paper, printing and engraving, &c.	6	8	1	7	1	6	2	41	4	62	8	70
Vehicles and fittings, saddlery and harness, &c.	11	3	.....	2	.....	3	.....	27	...	35	...	35
Furniture, bedding, &c.	2	...	.....	...	.....	...	.....	2	...	2	...	2
Heat, light and power	3	...	.....	...	.....	...	.....	43	...	43	...	43
Minor wares, n.e.i.	6	1	.....	1	.....	...	.....	17	1	19	1	20
Total	148	21	11	43	33	44	57	485	97	593	198	791

TABLE XXX.

Horse-power of Machinery used, 1914.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
Treating raw materials, product of pastoral pursuits	1	18	6	...	.....	.....	...	.....	.....
Oils and fats—animal, vegetable, &c.	...	.....	.....	...	.....	.....	...	.....	.....
Processes in stone, clay, glass, &c.	1	50	25	...	.....	.....	...	.....	.....
Working in wood	1	160	130	2	10	9	15	102	82
Metal works, machinery, &c.	1	95	95	1	14	14	6	35	32
Connected with food and drink, &c.	2	44	29	23	330	289	13	68	49
Clothing and textile fabrics, &c.	...	.....	.....	...	.....	.....	1	2	1
Books, paper, printing, engraving, &c.	2	20	18	2	13	10	3	17	13
Vehicles and fittings, saddlery and harness, &c.	...	.....	.....	2	10	9	3	9	9
Furniture, bedding, &c.	...	.....	.....	...	.....	.....	...	.....	.....
Heat, light and power	3	395	314	1	5	4	1	200	150
Minor wares, n.e.i.	...	.....	.....	...	.....	.....	...	.....	.....
Total	11	782	617	31	382	335	42	433	336

TABLE XXXI.

Classification of Factories according to Number of Persons employed, 1914.

Class of Factory.	Number of Factories in which the number of persons employed are—														Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and over.	
Treating raw material, product of pastoral pursuits	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Oils and fats—animal, vegetable, &c.	1	1	...	...	...	...	...	...	...	...	...	...	...	...	2
Processes relating to stone, clay, glass, &c.	1	...	1	...	...	...	...	...	...	...	...	...	...	...	2
Working in wood	16	2	...	...	...	1	...	...	...	...	...	...	...	...	19
Metal works, machinery, &c.	5	4	..	1	...	1	...	...	...	...	...	...	...	...	11
Connected with food and drink, &c.	40	13	2	1	1	...	...	...	...	...	...	...	...	...	57
Clothing and textile fabrics, &c.	10	11	5	1	1	...	...	...	...	...	...	...	...	..	28
Books, paper, printing, engraving, &c.	1	2	2	1	...	...	...	...	...	...	...	...	...	...	6
Vehicles and fittings, saddlery, harness, &c.	5	6	...	...	...	...	...	...	...	...	...	...	...	...	11
Furniture, bedding, &c.	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Heat, light and power	...	...	3	...	...	...	...	...	...	...	...	...	...	...	3
Minor wares, n.e.i.	4	1	1	...	...	...	...	...	...	...	...	...	...	...	6
Total	86	40	14	4	2	2	...	...	...	...	...	...	...	...	148

WESTERN DISTRICT RETURNS.

NOTE.—This District was proclaimed on 1st August, 1904, and was known as the Hartley District. Extended on 3rd October, 191 and called "Western."

TABLE XXXII.

Classification of Persons Employed, 1914.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		16 years and under 18 years.		18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	T
I. Treating raw materials, &c. ...	7	...	.....	1	.. ...	1	.....	44	.....	46	.....	
II. Oils and fats—animal and vegetable, &c.	5	...	.....	2	.....	...	.....	7	.....	9	.....	
III. Processes in stone, clay, glass, &c.	18	6	.....	13	.....	31	.....	853	.....	903	.. ...	
IV. Working in wood	32	1	.....	7	.....	12	.....	83	.....	103	.. ...	
V. Metal works, machinery, &c.	22	12	.....	53	.....	49	.....	529	.....	643	.....	
VI. Connected with food and drink, &c.	114	4	.....	29	2	27	.....	367	2	427	4	
VII. Clothing and textile fabrics, &c.	41	3	20	5	49	10	68	81	125	99	262	
VIII. Books, paper, printing, &c. ...	18	10	2	11	.....	26	.....	89	.....	136	2	
XI. Vehicles and fittings, saddlery and harness	31	3	.....	24	.....	28	.....	106	.....	161	.....	
XIII. Furniture, &c.	1	...	.....	8	.....	...	.....	13	1	21	1	
XVII. Heat, light and power	14	4	.....	1	.....	4	.....	101	.....	110	.....	
XIX. Minor wares n.e.i. (laundry)	5	...	.....	...	7	1	7	7	19	8	33	
Total..	308	43	22	154	58	189	75	2,280	147	2,666	302	2

TABLE XXXIII.

Horse-power of Machinery used, 1914.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Ac u
I. Treating raw materials, product of pastoral pursuits	2	38	23	4	51	24	1	6	
II. Oils and fats—animal, vegetable, &c.	2	20	10	...	.....	.....	1	70	
III. Processes in stone, clay, glass, &c.	9	3,729	2,810	...	.....	.....	10	1,471	1,
IV. Working in wood	9	167	116	14	120	108	5	30	
V. Metal works, machinery, &c.	5	4,914	3,412	5	49	34	4	15	
VI. Connected with food and drink, &c.	27	887	664	24	620	450	8	41	
VII. Clothing and textile fabrics, &c.	1	126	86	1	3	2	1	8	
VIII. Books, paper, printing and engraving, &c.	...	.....	.....	11	58	44	5	14	
XI. Vehicles and fittings, saddlery and harness, &c.	2	11	7	3	15	11	3	13	
XVII. Heat, light and power	6	624	113	5	103	82	2	25	
XIX. Minor wares n.e.i. (laundry)	3	28	20	1	5	3	...	.....	
Total	66	10,544	7,261	68	1,024	758	40	1,693	1

TABLE XXXIV.

Classification of Factories according to Number of Persons employed, 1914.

Class of Factory.	Number of Factories in which the number of persons employed are—													
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and over.
I. Treating raw material, product of pastoral pursuits ..	4	2	...	1	...	...	...	...	...	...	...	...	...	...
II. Oils and fats—animal, vegetable, &c.	5	...	...	...	...	...	...	...	...	...	...	...	...	1
III. Processes relating to stone, clay, glass, &c.	5	5	2	...	3	1	1	...	...	...	...	...	...	...
IV. Working in wood	23	8	1	...	...	...	...	...	...	...	...	...	...	...
V. Metal works, machinery, &c.	9	10	1	...	...	...	...	...	...	...	1	1	...	...
VI. Connected with food and drink, &c.	84	21	6	3	...	...	...	...	...	...	...	...	...	...
VII. Clothing and textile fabrics, &c.	8	25	3	3	1	1	...	...	...	...	...	...	...	...
VIII. Books, paper, printing, engraving, &c.	5	7	6	...	...	...	...	...	...	...	...	...	...	...
XI. Vehicles and fittings, saddlery, harness, &c.	11	18	1	1	...	...	...	...	...	...	...	...	...	...
XIII. Furniture, &c.	...	...	...	1	..	...	...	...	...	...	...	...	...	...
XVII. Heat, light and power	8	3	1	...	2	...	...	...	...	...	...	...	...	...
XIX. Minor wares n.e.i. (laundry)	1	2	2	...	...	...	...	...	...	...	...	...	...	...
Total	163	101	23	9	6	2	1	...	...	...	1	1	...	1

GOULBURN DISTRICT RETURNS.

NOTE.—This District was proclaimed on 1st May, 1907. Further extended on 3rd October, 1911.

TABLE XXXV.

Classification of Persons employed, 1914.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		16 years and under 18 years.		18 years and over.		Over 21 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Treating raw materials, &c.	6	...	...	...	...	1	...	17	...	18	...	18
Processes in stone, clay, glass, &c.	20	3	...	5	...	8	...	98	...	114	...	114
Working in wood	23	1	...	5	...	5	...	47	...	58	...	58
Metal works, machinery, &c.	5	2	...	3	...	4	...	17	..	26	...	26
Connected with food and drink, &c.	69	3	...	8	...	16	...	143	2	170	2	172
Clothing and textile fabrics, &c.	33	7	5	6	16	11	30	104	56	128	107	235
Books, paper, printing, &c.	6	5	...	3	...	3	...	23	...	34	...	34
Vehicles and fittings, saddlery and harness	5	2	...	8	...	12	...	48	...	70	...	70
Furniture, bedding, &c.	2	...	...	1	...	1	...	3	...	5	...	5
Drugs, chemicals, &c.	1	...	...	...	...	...	...	2	...	2	...	2
Heat, light and power	7	..	...	1	...	...	...	9	...	10	...	10
Minor wares n.e.i. (laundry)	1	...	...	...	...	...	3	1	4	1	7	8
Total	188	23	5	40	16	61	33	512	62	636	116	752

TABLE XXXVI.

Horse-power of Machinery used, 1914.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
Treating raw materials, product of pastoral pursuits	3	37	30	...	.....	.....	...	.....	.....
Processes in stone, clay, glass, &c.	4	117	93	...	.....	.....	3	16	9
Working in wood	10	118	80	4	51	38	3	21	15
Metal works, machinery, &c.	...	.....	.....	1	12	12	...	.....	.....
Connected with food and drink, &c.	10	196	154	9	234	204	9	70	56
Clothing and textile fabrics, &c.	...	.....	.....	3	99	59	1	3	3
Books, paper, printing and engraving, &c.	...	.....	.....	4	17	14	2	4	3
Vehicles and fittings, saddlery and harness, &c.	...	.....	.....	4	44	31	3	16	15
Heat, light and power	3	198	92	...	.....	.....	2	70	34
Minor wares n.e.i. (laundry)	1	4	3	...	.....	.....	...	.....	.....
Total	31	670	452	25	457	358	23	200	135

TABLE XXXVII.

Classification of Factories according to Number of Persons employed, 1914.

[Class of Factory.	Number of Factories in which the number of persons employed are—														Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and over.	
Treating raw materiai, product of pastoral pursuits	4	1	1	...	...	...	...	...	...	...	...	...	...	...	6
Processes relating to stone, clay, glass, &c.	8	8	3	1	...	...	...	...	...	...	...	...	...	...	20
Working in wood	18	4	...	1	...	...	...	...	...	...	...	...	...	...	23
Metal works, machinery, &c.	3	...	2	...	...	...	...	...	...	...	...	...	...	...	5
Connected with food and drink, &c.	59	7	2	1	...	...	...	...	...	...	..	...	...	...	69
Clothing and textile fabrics, &c.	14	14	3	...	1	...	1	...	...	...	...	...	...	...	33
Books, paper, printing, engraving, &c.	3	2	1	..	...	...	...	...	...	...	...	...	...	...	6
Vehicles and fittings, saddlery, harness, &c.	8	5	2	...	...	...	...	...	...	...	...	...	...	...	5
Furniture, bedding, &c.	1	1	...	...	...	...	...	...	...	...	...	...	...	...	2
Drugs, &c.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Heat, light and power	5	2	..	...	...	...	...	...	...	...	...	...	...	...	7
Minor wares n.e.i. (laundry)	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Total	124	45	14	3	1	...	1	...	...	...	...	...	...	..	188

ALBURY DISTRICT RETURNS.

NOTE.—This District was proclaimed on 1st November, 1909.

TABLE XXXVIII.

Classification of Persons employed, 1914.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	To
I. Treating raw materials, product of pastoral pursuits	...	...	.....	...	.....	...	.....	...	...	...	...	
II. Oils and fats—animal, vegetable, &c.	1	...	.....	...	.....	...	.....	1	...	1	...	
III. Processes in stone, clay, glass, &c.	14	1	.....	1	.....	4	.....	44	...	50	...	
IV. Working in wood	11	...	.....	7	.....	4	.....	73	...	84	...	
V. Metal works, machinery, &c.	17	2	.....	5	.....	11	.....	27	...	45	...	
VI. Connected with food and drink, &c.	65	1	.....	20	.....	23	.....	139	1	183	1	
VII. Clothing and textile fabrics, &c.	31	1	15	1	23	4	41	27	83	33	162	
VIII. Books, paper, printing and engraving, &c.	10	3	.....	2	.....	12	.....	41	1	58	1	
XI. Vehicles and fittings, saddlery and harness, &c.	26	1	.....	14	.....	24	.....	118	...	157	...	
XIII. Furniture, bedding, &c.	1	...	.....	1	.....	...	.....	3	...	4	...	
XVI. Jewellery, &c.	1	...	.....	...	.....	1	.....	3	...	4	...	
XVII. Heat, light and power	5	...	.....	...	.....	...	.....	9	...	9	...	
XIX. Minor wares, n.e.i.	5	...	.....	1	3	1	4	8	5	10	12	
Total	187	9	15	52	26	84	45	493	90	638	176	

TABLE XXXIX.

Horse-power of Machinery used, 1914.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actu us
I. Treating raw materials, product of pastoral pursuits	...	.....	.....	...	.....	.....	...	.....	...
II. Oils and fats—animal, vegetable, &c.	2	28	22	...	.....	.....	5	30	
III. Processes in stone, clay, glass, &c.	3	68	48	3	76	74	2	44	
IV. Working in wood	...	.....	.....	5	53	27	3	19	
V. Metal works, machinery, &c.	8	537	267	9	131	86	8	46	
VI. Connected with food and drink, &c.	...	.....	.....	...	.....	.....	1	3	
VII. Clothing and textile fabrics, &c.	...	.....	.....	5	40	27	3	7	
VIII. Books, paper, printing, engraving, &c.	...	.....	.....	2	35	22	1	8	
XI. Vehicles and fittings, saddlery and harness, &c.	...	.....	.....	...	.....	.....	...	.....	..
XIII. Furniture, bedding, &c.	...	.....	.....	...	.....	.....	...	.....	..
XVII. Heat, light and power	1	3	1	4	126	84	...	.....	..
XIX. Minor wares, n.e.i.	1	8	8	...	.....	.....	...	.....	..
Total	15	644	336	28	461	320	23	157	

TABLE XL.

Classification of Factories according to Number of Persons employed, 1914.

Class of Factory.	Number of Factories in which the number of persons employed are—													
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and over.
I. Treating raw materials, product of pastoral pursuits	...	...	...	...	...	...	...	...	...	...	...	...	...	...
II. Oils and fats—animal, vegetable, &c.	1	...	...	...	...	...	...	...	...	...	...	...	...	...
III. Processes relating to stone, clay, glass, &c.	9	5	...	...	...	...	...	...	...	...	...	...	...	...
IV. Working in wood	5	3	2	1	...	...	...	...	...	...	...	...	...	...
V. Metal works, machinery, &c.	12	5	...	...	...	...	...	...	...	...	...	...	...	...
VI. Connected with food and drink, &c.	54	7	3	...	1	...	...	...	...	...	...	...	...	...
VII. Clothing and textile fabrics, &c.	12	14	12	2	1	...	...	...	...	...	...	...	...	...
VIII. Books, paper, printing, engraving, &c.	4	4	3	...	...	...	...	...	...	...	...	...	...	...
XI. Vehicles and fittings, saddlery, harness, &c.	11	10	3	2	...	...	...	...	...	...	...	...	...	...
XIII. Furniture, bedding, &c.	...	1	...	...	...	...	...	...	...	...	...	...	...	...
XVI. Jewellery, &c.	...	1	...	...	...	...	...	...	...	...	...	...	...	...
XVII. Heat, light and power	4	1	...	...	...	...	...	...	...	...	...	...	...	...
XIX. Minor wares, n.e.i.	3	2	...	...	...	...	...	...	...	...	...	...	...	...
Total	115	53	12	5	2	...	...	...	...	...	...	...	...	...

Table XLI.

Prosecutions in each District during the year 1914.

Factories and Shops Act.

District.	Informations Laid.	Convictions.	Dismissals.	Withdrawn on Payment of Costs.	Withdrawals (Other).
Metropolitan	169	160	2	1	6
Newcastle	4	4	.....	.....	.....
Albury	.....	.....	.....	.....	.....
Broken Hill	.....	.....	.....	.....	.....
Western	1	1	.....	.....	.....
Goulburn	3	3	.....	.....	.....
Totals	177	168	2	1	6

Prosecutions, 1910–14.

Year.	Informations Laid.	Convictions.	Dismissals.	Withdrawals (Costs Paid).	Withdrawals (Other).
1910	176	132	7	.....	37
1911	131	110	5	2	14
1912	124	118	3	.....	3
1913	90	89	1	....	.....
1914	177	168	2	1	6

[Three diagrams.]

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1916.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

DEPARTMENT OF LABOUR AND INDUSTRY.

REPORT

ON THE WORKING OF THE

ACTORIES AND SHOPS ACT, 1912,

DURING THE YEAR 1915.

Printed under No. 1 *Report from Printing Committee,* 3 *August,* 1916.

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1916.

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The Under Secretary, Department of Labour and Industry, to The Honourable the Minister for Labour and Industry.

Department of Labour and Industry,
30 June, 1916.

Sir,

I have the honour to forward for submission to Parliament, in terms of section 19 of the Factories and Shops Act, 1912, Annual Reports on the operations of that Act by each of the Inspectors appointed thereunder, for the year ending the 31st December, 1915.

I have the honor to be, Sir,

Your obedient servant,

J. B. HOLME,

Under Secretary.

Report of Mr. C. J. Alderdice, Chief Inspector of Factories.

Administration.

The year 1915 was a busy one for the Inspectorial Staff both in the work of factory inspection and investigation under the Industrial Arbitration Act. The extension of the provisions of the Factories and Shops Act to the whole of the State from the 1st July, 1915, necessitated a tour of inspection of nearly the whole of that large country area over which the Act had not previously operated, mainly for the purpose of dealing with over 1,000 applications for registration, and generally to explain to the occupiers of factories the provisions of the Act, as well as to secure the registration of premises, the occupiers of which had not recognised that their operations brought them within such provisions. This entailed extra work on the Clerical Staff which was kept working at high pressure, and the Statistics indicate a substantial increase in all sections of the work.

Cards of instruction served on the occupiers of factories within the Metropolitan District numbered 14,377 for 1915 compared with 10,191 in 1914, and in the Newcastle District 769 as against 323 in 1914. In the rest of the State the cards of instructions totalled 1,951.

Appointments and Changes in the Staff.

Mr. Inspector J. Kirby resigned his position in the Department as an Inspector under the Industrial Arbitration Act and the Factories and Shops Act as from the 18th May. Mr. Inspector W. J. J. Baker, of the Orange Branch, entered camp at Lithgow on the 1st October for active service with the Australian Expeditionary Forces, and the Orange office was closed and district headquarters transferred to Lithgow. Mr. Inspector J. Wallace will take charge of the Lithgow office as from the 1st January, 1916.

Records.

A monthly record of operations under the Factories and Shops Act, comprising registrations and cancellations of factories, particulars of breaches, details of accidents, &c., appears in the *Industrial Gazette of New South Wales*, the monthly publication of the Department.

Factory cards of instructions served on occupiers (duplicates filed in office):—

Metropolitan District	14,377
Newcastle District	769
Western District	117
Goulburn District	51
Albury District	195
Broken Hill District	45
Other Districts	1,543
Total	17,097

Correspondence (exclusive of Departmental reports, &c.):—

Letters:—

Metropolitan, Goulburn, Albury, and other districts ...	7,221
Newcastle District	2,037
Western District	256
Broken Hill District	836
Total	10,350

Circulars:—

Metropolitan District	18,273

Certificates of Fitness and permits to work:—

Metropolitan District	5,256
Newcastle District	349
Western District	45
Goulburn District	37
Albury District	2
Broken Hill District	21
Other Districts	46
Total	5,756

The Year's Statistics.

The Statistics for 1914 were, owing to the outbreak of the war, collected in October, 1914, in order to show the extent of employment as at the 30th September, and to ascertain to what extent unemployment had been induced by the European crisis. The figures for 1915 were collected during December, showing the total employment as at the 30th November, and it is satisfactory to record that there is, except in the Albury District, an increase in every district covering the same area as compared with 1914.

On the 30th November there were, throughout the whole State, on the records of the Department, 7,425 factories employing 99,223 persons, of whom 70,517, or 71 per cent., were males, and 28,706, or 29 per cent., females. In the new area coming under the operation of the Act there were 1,178 factories employing 5,912 persons, 5,529 males and 383 females, so that the balance of 6,247 factories and 93,311 persons were in the same areas as those in which the figures for 1914 were supplied. These figures, therefore, show an increase of 254 factories and 3,170 persons employed at the end of 1915, compared with the figures for 1914. Of the total persons employed in this area, 64,988, or 69·6 per cent., are males, and 28,323, or 30·4 per cent., females.

The figures for 1915 are prepared, as far as possible, on the basis of the previous years, for the purposes of comparison, as the application of the Factories and Shops Act to the whole of the State took effect only as from the 1st July.

Details for each district of the number and sex of persons, class of factory in which they are employed, horse-power of machinery used, increase or decrease, &c., will be found in the Appendices.

Registration of Factories during Year 1915.

District.	Registrations effective at 31st December, 1914.	Registrations.	Cancellations.	Increase (+) or Decrease (—).	Registrations effective at 31st December, 1915.
Metropolitan	4,648	1,062	919	(+) 143	4,791
Newcastle	580	70	69	(+) 1	581
Western	308	83	25	(+) 58	366
Broken Hill	153	23	19	(+) 4	157
Albury	192	27	31	(—) 4	188
Goulburn	188	36	20	(+) 16	204
Other portions of State	.....	1,237	3	(+) 1,234	1,234
	6,069	2,538	1,086	(+) 1,452	7,521

Metropolitan District.

This district was declared by proclamation a factory district for the purposes of the Factories and Shops Act from the 1st February, 1897, was extended by proclamation from the 1st August, 1904; was further extended by proclamation from the 3rd October, 1911; and still further extended by proclamation from the 1st January, 1914.

Original area	535 square miles.
Present area	5,414 ,, ,,

On the 30th November, 1915, there were 4,758 registered factories in the Metropolitan District, employing 81,329 persons, an increase of 179 factories and 1,990 persons as compared with the figures at the end of 1914, when the figures showed a decrease of 4,866 persons, the only occasion upon which a decrease of persons employed in factories in the Metropolitan District had to be recorded since the Act was passed.

Of

DIAGRAM A.

Showing Percentages of Persons of each Sex, in Age Groups, of Total Number employed in the Metropolitan District, 1915.

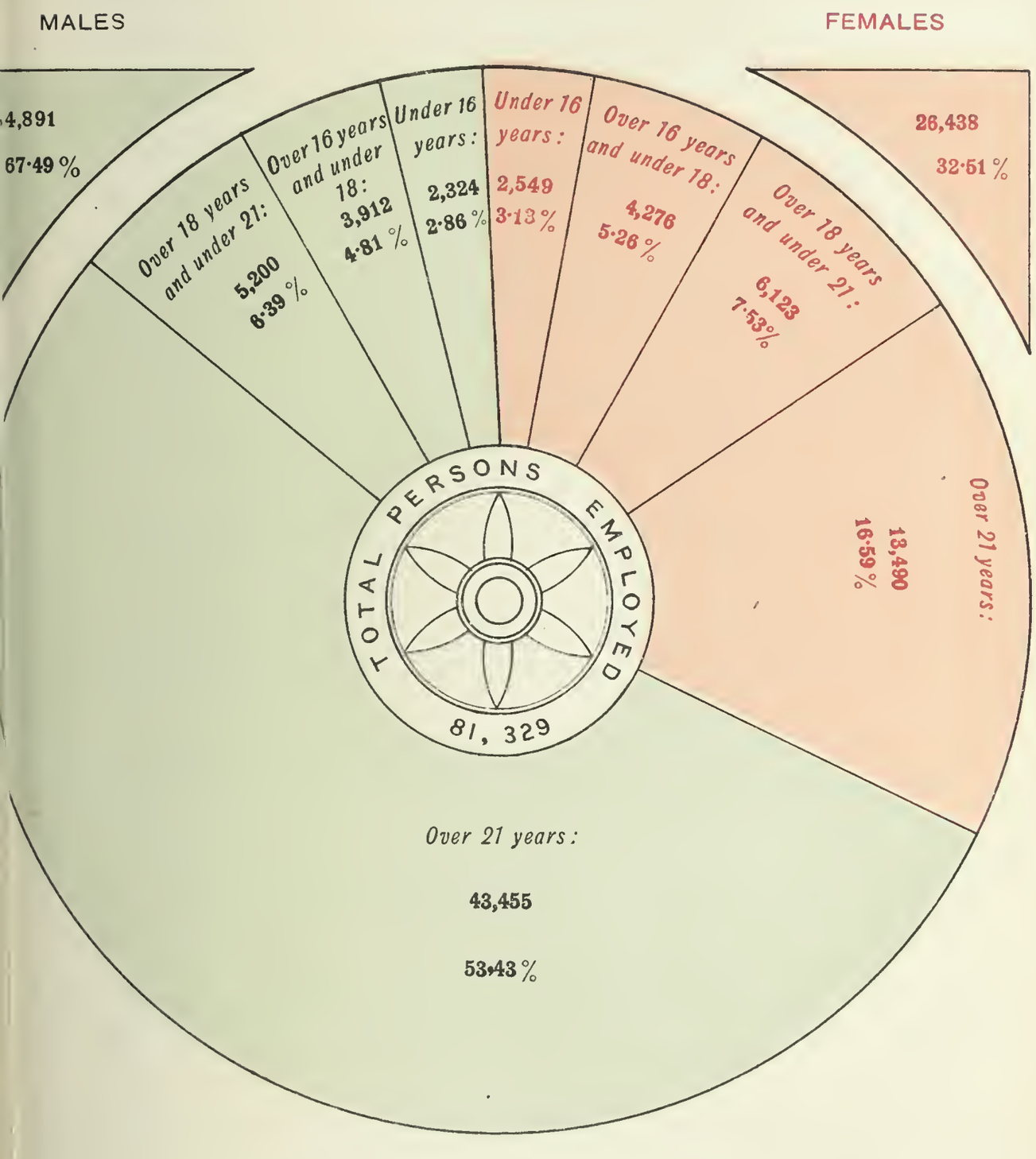
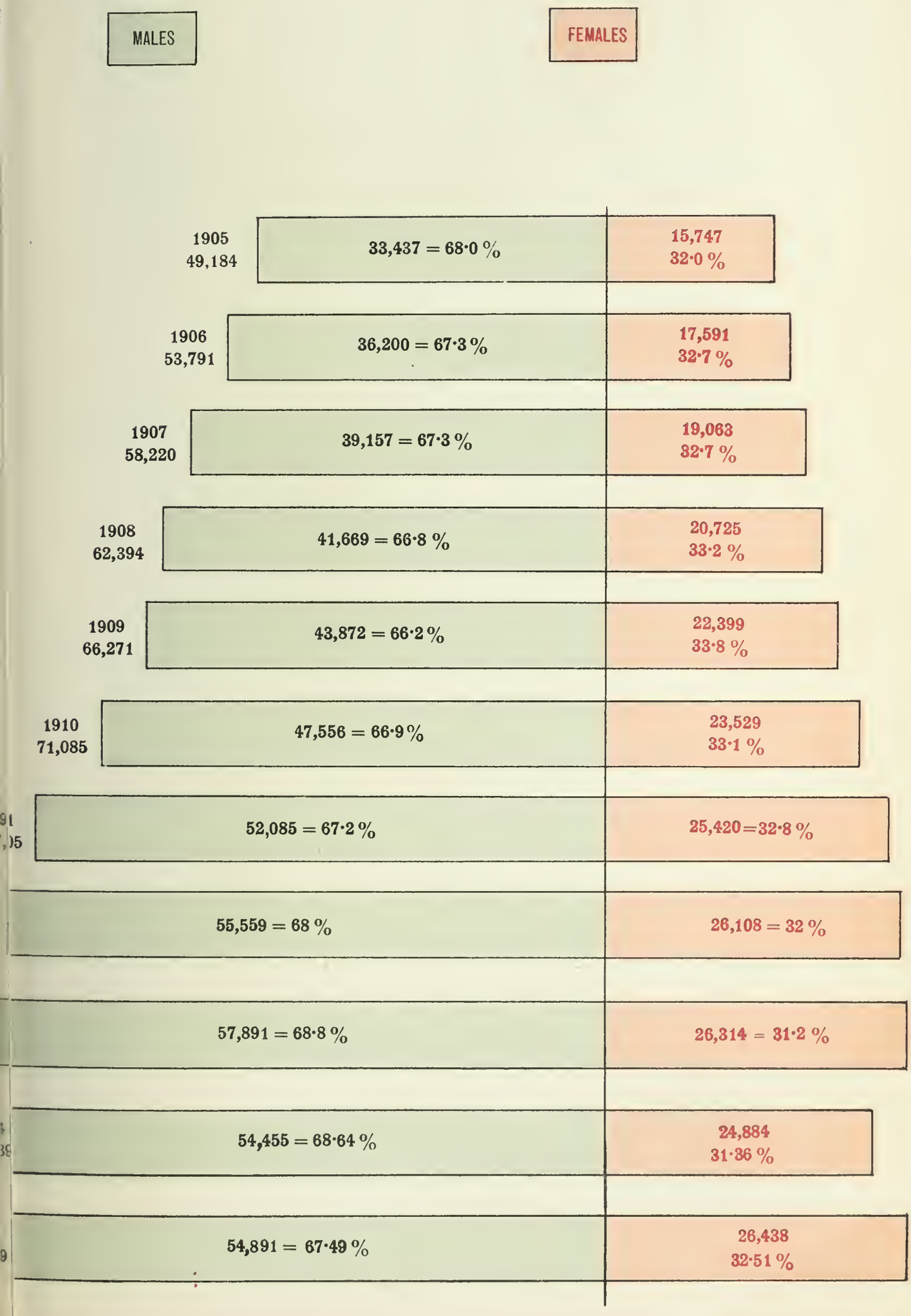


DIAGRAM B.

Showing Annual Totals and Percentages of Persons of each Sex employed in the Metropolitan District, 1905-1915.



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Of the total number of persons employed, males represent 54,891, and females 26,438, or 67·5 and 32·5 per cent. respectively. Only 4,873, or 5·9 per cent. of the total, are under 16 years of age; 8,188, or 10·1 per cent., are between 16 and 18 years; 11,323, or 13·9 per cent., are between 18 and 21 years; and the remainder, 56,945, or 70·1 per cent., are over 21 years of age.

Of the total males employed, 2,324, or 4·2 per cent., are under 16 years; 3,912, or 7·1 per cent., are between 16 and 18 years; 5,200, or 9·5 per cent., between 18 and 21 years; and the remainder, 43,455, or 79·2 per cent., are over 21 years of age.

Of the total females employed, 2,549, or 9·7 per cent., are under 16 years of age; 4,276, or 16·2 per cent., are between 16 and 18 years; 6,123, or 23·1 per cent., between 18 and 21 years; and the remainder, 13,490, or 51 per cent., are over 21 years of age.

The number of females under and over 21 years of age are about equal, being 12,948 and 13,490 respectively, the difference being slightly in favour of those over 21 years; while in the case of males the number under 21 years of age is 11,436, compared with 43,455 over 21 years of age. There are more females than males under 21 years of age employed in the factories in the Metropolitan District, whereas the males over 21 years exceed the females over that age by nearly 3¼ to 1. (*See* Diagram A.)

During the period 1909 to 1913 the percentage of boys and girls under 16 years of age employed in factories in the Metropolitan District regularly and steadily decreased, but for 1914 and 1915 the percentage has slightly increased, although it has not reached that for 1909, as the following table shows:—

	Males under 16.	Females under 16.
1909 ...	3·17 per cent.	3·48 per cent.
1910 ...	2·8 „	3·13 „
1911 ...	2·6 „	3·1 „
1912 ...	2·3 „	2·95 „
1913 ...	2·24 „	2·85 „
1914 ...	2·37 „	2·90 „
1915 ...	2·86 „	3·13 „

Taking the males and females under 16 years of age collectively, there was a regular decrease during the period 1909 to 1913, but during the last two years the percentage has slightly increased, in 1915 equalling that for 1910, but still below that for 1909, as shown in the following statement:—

	All persons under 16 years of age.
1909...	6·8 per cent.
1910...	5·9 „
1911...	5·8 „
1912...	5·2 „
1913...	5·1 „
1914...	5·2 „
1915...	5·9 „

It is, I consider, very satisfactory to be able to record that out of a total of 81,329 persons employed in the Metropolitan District only 5·9 per cent. are under 16 years of age, when the age at which boys and girls may enter factories is as low as 14 years.

The industries which show an increase over the figures for 1914 are:—

	Increase in Employees.
Treating Raw Materials	456
Food and Drink	1,077
Clothing	706
Printing	309
Drugs and Chemicals	161
Leatherware	122
Minor Wares...	568
	3,399

In all other industries there is a decrease, the largest numbers being in the following:—

Stone, Clay and Glass	375
Wood-working	367
Metal Working	91
Ship and Boat-building	161
Jewellery	65
Heat, Light and Power	204

The industry employing the greatest number of persons is, as in previous years, clothing and textile fabrics, with 22,956, compared with 22,250 at the end of 1914, followed by food and drink, &c., with 12,744, as against 11,667 in 1914; and metal works, machinery, &c., with 10,889, against 10,980 in the previous year. These three classes account for 46,589 out of the total of 81,329 employed in all classes of factories in the Metropolitan District.

The

The following statement will show the increase or decrease in persons, males and females, from 1906 to 1915, inclusive :—

Year.	Persons employed.			Increase.			Percentage of Total Increase.	
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
							Per cent.	Per cent.
1906 ..	36,200	17,591	53,791	2,763	1,844	4,607	59·9	40·1
1907 ...	39,157	19,063	58,220	2,957	1,472	4,429	66·7	33·3
1908 ...	41,669	20,725	62,394	2,512	1,662	4,174	60·2	39·8
1909 ...	43,872	22,399	66,271	2,203	1,674	3,877	56·8	43·2
1910 ...	47,556	23,529	71,085	3,684	1,130	4,814	76·5	23·5
1911 ...	52,085	25,420	77,505	4,529	1,891	6,420	70·5	29·5
1912 ...	55,559	26,108	81,667	3,474	688	4,162	83·5	16·5
1913 ...	57,891	26,314	84,205	2,332	206	2,538	91·9	8·1
1914 ...	54,455	24,884	79,339	*3,436	*1,430	*4,866	*70·6	*29·4
1915 ...	54,891	26,438	81,329	436	1,554	1,990	21·9	78·1

* Decrease.

Table showing increase in number of factories and persons employed therein during the period 1897 to 1915 :—

Year.	Number of Factories.	Increase.	Persons Employed.	Increase.
1897	1,673	...	29,595	...
1898	1,812	139	31,617	2,022
1899	1,909	97	34,235	2,618
1900	2,047	138	39,104	4,869
1901	2,195	148	42,273	3,169
1902	2,393	198	43,830	1,557
1903	2,430	37	44,003	173
1904	2,583	153	45,665	1,662
1905	2,680	97	49,184	3,519
1906	2,790	110	53,791	4,607
1907	2,840	50	58,220	4,429
1908	3,142	302	62,394	4,174
1909	3,396	254	66,271	3,877
1910	3,670	274	71,085	4,814
1911	3,843	173	77,505	6,420
1912	3,989	146	81,667	4,162
1913	4,322	333	84,205	2,538
1914	4,579	257	79,339	*4,866
1915	4,758	179	81,329	1,990
	Total increase	3,085 factories		51,734 persons.

* Decrease.

The mean annual increase in all persons employed in factories in the Metropolitan District for the period 1910–1915 is 2·7 per cent., while the actual increase for 1915 is 2·5 per cent.

Of the factories on the Register of the Department at the close of the year in the Metropolitan District :—

1	employed	1,165	persons.				
4	,,	between	750	and	1,000	persons	each.
7	,,	,,	500	,,	750	,,	,,
7	,,	,,	400	,,	500	,,	,,
8	,,	,,	300	,,	400	,,	,,
25	,,	,,	200	,,	300	,,	,,
33	,,	,,	150	,,	200	,,	,,
67	,,	,,	100	,,	150	,,	,,
34	,,	,,	80	,,	100	,,	,,
76	,,	,,	60	,,	80	,,	,,
130	,,	,,	40	,,	60	,,	,,
148	,,	,,	30	,,	40	,,	,,
299	,,	,,	20	,,	30	,,	,,
696	,,	,,	10	,,	20	,,	,,
1,362	,,	,,	4	,,	10	,,	,,
1,861	,,	under 4 persons each.					

From this table it will be seen that there are 152 factories, each employing from 100 to over 1,000 persons, and 687 factories, each employing between 20 and 100 persons, in the Metropolitan District.

A comparison of these figures with those for previous years will be found on reference to Table "X."

The individual reports of the Factory Inspectors will be found on subsequent pages.

Newcastle District.

This district was declared by proclamation a factory district for the purposes of the Factories and Shops Act, from the 6th February, 1899; the area was increased by proclamation from the 1st August, 1904, and was further increased by proclamation from the 1st January, 1914.

Original area...	449 square miles.
Present area	4,579 „ „
Inspectors	Ralph C. Huntley. George R. Young. George C. Gregory.

The figures for the Newcastle District show a decrease of 4 factories, but an increase of 845 in the number of persons employed, of whom 789 are males and 56 females.

The large increase in male employment is the result of the operation of the Steel and Iron Works of the Broken Hill Proprietary Company, Limited, at Port Waratah, which at the end of the year employed 699 persons, all males; the Sulphide Corporation Smelting Works at Coekle Creek employed 485 persons (males) at the end of the year.

Of the factories on the Register at the close of the year in the Newcastle District:—

1	employed	699	persons.			
1	„	485	„			
2	„	between	200	and	300	persons.
1	„	„	150	„	200	„
3	„	„	100	„	150	„
1	„	„	80	„	100	„
5	„	„	60	„	80	„
12	„	„	40	„	60	„
12	„	„	30	„	40	„
18	„	„	20	„	30	„
62	„	„	10	„	20	„
156	„	„	4	„	10	„
305	„	under 4 persons each.				

The reports of Inspectors Young and Gregory upon the operation of the Act in the Newcastle District will be found on a subsequent page. Mr. Inspector Huntley was busily engaged during the greater part of the year on work in connection with the Departmental Labour Exchange.

Broken Hill District.

The Municipality of Broken Hill was declared by proclamation a district for the purposes of the Factories and Shops Act, from the 1st March, 1903.

Area	26 square miles.
Inspector	Frederiek V. Field.

There was a marked improvement in the mining industry during the year owing to the advaneed prices for metal, but eonditions will be mueh below normal in such an essentially a metal mining district as Broken Hill while the war continues.

When the figures were collected, there was an increase of 8 factories and 23 persons on the figures of 1914—males showing an inerease of 78, and females a decrease of 55.

Of the factories on the Register at the close of the year 1915:—

1	employed	100	persons.			
1	„	59	„			
2	„	between	30	and	10	persons each.
3	„	„	20	„	30	„ „
12	„	„	10	„	20	„ „
42	„	„	4	„	10	„ „
94	„	under 4 persons each.				

Mr. Inspector Field's report will be found on a subsequent page.

Western

Western District.

Portion of the Hartley Electorate was declared by proclamation a district for the purposes of the Factories and Shops Act from the 1st August, 1904. The provisions of the Act were extended by proclamation to the electorates of Bathurst, Blayney, and Orange, on the 24th August, 1911, and the area was further extended by proclamation to include the electorates of Lyndhurst and Mudgee from the 1st January, 1914.

Original area...	657 square miles.
Present area	12,158 „ „
Inspector	W. J. J. Baker.

Conditions generally were very satisfactory in the Western District during 1915, and at the close of the year the returns show an increase of 54 factories, and 379 persons, compared with those for 1914, the actual figures being 362 factories, employing 3,347 persons at the end of 1915, as against 308 factories, and 2,968 persons, employed for 1914.

Of the factories on the Register at the close of the year 1915:—

1	employed	583	persons.			
1	„	469	„			
1	„	202	„			
1	„	94	„			
1	„	77	„			
4	„	between 40 and 60 persons each.				
2	„	„	30	„ 40	„	„
8	„	„	20	„ 30	„	„
33	„	„	10	„ 20	„	„
102	„	„	4	„ 10	„	„
208	„	under 4 persons each.				

Mr. Inspector W. J. J. Baker, having enlisted for service with the Expeditionary Forces in October, has not been able to furnish a report upon the operation of the Act in the Western District during the year 1915.

Goulburn District.

This district was declared by proclamation a district for the purposes of the Factories and Shops Act from the 1st May, 1907. The area was increased by proclamation from the 3rd October, 1911; and further increased by proclamation from the 1st January, 1914.

Original area	870 square miles.
Present area	6,288 „ „

There is an increase of 17 factories and 24 persons, compared with the figures at the end of 1914.

Of the registered factories in this district at the end of the year 1915:—

1	employed	69	persons.			
4	„	between 20 and 30 persons each.				
17	,	„	10	„ 20	„	„
50	„	„	4	„ 10	„	„
133	„	under 4 persons each.				

Albury District.

The Electoral District of Albury was proclaimed a district under the Factories and Shops Act from the 1st November, 1909, by proclamation in the *Government Gazette* of the 6th October, 1909; and this area was increased by proclamation from the 1st January, 1914, so as to include the Electorate of Wagga.

Original area	3,350 square miles.
Present area	5,969 „ „

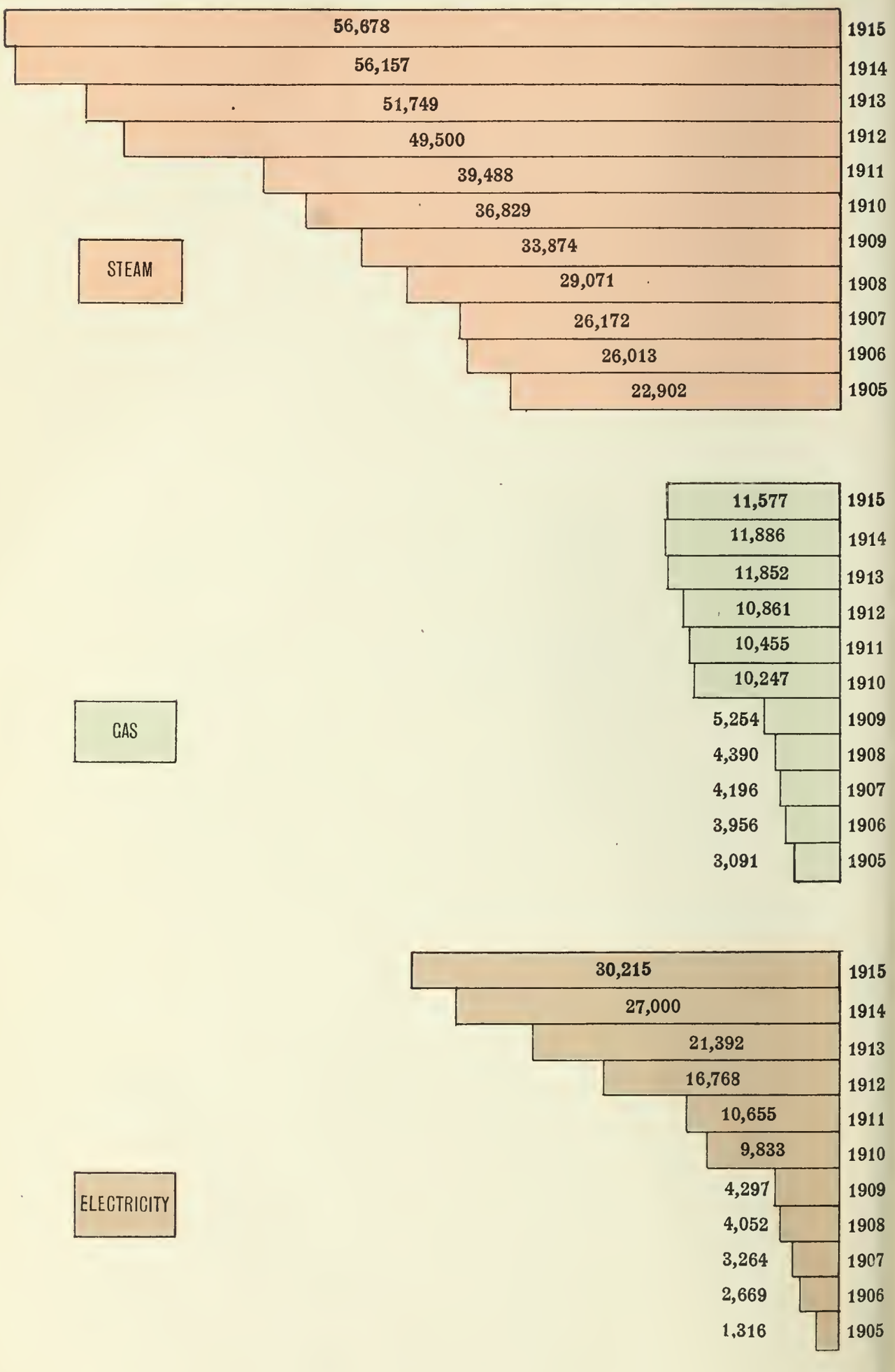
There is no alteration in the number of factories, although there is a decrease of 91 persons in 1915, compared with the figures at the end of 1914.

Of the registered factories in this district at the close of the year 1915:—

2	employed	between 20 and 30 persons each.				
17	„	„	10	„ 20	„	„
43	„	„	4	„ 10	„	„
125	„	under 4 persons each.				

DIAGRAM C.

Showing Horse-power used in Factories in the Metropolitan District: Steam, Gas, and Electricity, 1905-1915.



Horse-Power of Machinery.

The complete statistics of the horse-power of the machinery used in factories which are collected every second year, were last furnished at the end of 1914. In respect of the 1,178 factories in those parts of the State which were brought under the operation of the Act on 1st July, 1915, particulars of machinery have been obtained from the applications to register, but complete information will be obtained at the end of 1916.

At the close of the year 1915, 4,627 factories were using machinery equal to 132,506 horse-power, compared with 4,047 factories using machinery equal to 115,801 horse-power at the end of 1914, an increase of 580 factories and 16,705 horse-power.

In the Metropolitan Factories and Shops District, steam-power increased from 56,157 in 1914 to 56,678 in 1915; gas-power decreasing from 11,886 to 11,577, and electricity increasing from 26,983 to 30,215.

Statistics of the horse-power of the machinery in the various districts at the end of 1915 will be found on a subsequent page, and a reference to Diagram C will show the horse-power of the machinery in the Metropolitan District, and to what extent it has increased or decreased under the various headings of steam, gas, and electricity since 1904.

Employment of Children in Factories.

In terms of the Factories and Shops Act, no boy or girl under the age of 14 years is allowed to work in a factory except by the special permission of the Minister for Labour and Industry, and such special permission may under no consideration be granted to a boy or girl under 13 years of age. This permission is never granted unless the child is exempt from attending day-school, either by having attained a standard of educational efficiency, or by the special sanction of the Minister for Education where he is satisfied that the circumstances of the family render it absolutely necessary that the child should be free to assist in the upkeep of the home.

In December, 1909, the Minister for Labour and Industry decided that no girl under 14 years of age should work in any factory, except under the most extreme circumstances, and since that date it has been found necessary to grant the special permission in only 42 cases, or an average of 7 a year only for the last six years; in the previous six years the number totalled 691, an average of 115 a year.

In the Annual Report for 1914 it was stated on page 7 that in the five years previous to the Minister's decision of December, 1909, special permission had been granted in the cases of 1,774 girls under 14 years of age, an average of 354 a year. The correct figures are 589 cases, an average of 118 a year. Inadvertently the cases of boys under 14 years of age, to whom the special permission was granted, were included in the figures in the 1914 Report.

The number of persons under 16 years of age employed in factories and workrooms in the Metropolitan District when the figures were compiled was 5,256, of whom 2,755 were males and 2,501 females, compared with 4,178 at the end of 1914, of whom 1,874 were males and 2,304 females, an increase of 881 males and 197 females.

Certificates of Fitness.

Persons under the age of 16 years are required to obtain medical certificates of fitness in the prescribed form before they may be employed in any factory in which steam or other mechanical power is used, or in certain other factories, prescribed by regulations, in which the manufacturing process is regarded as dangerous to the health of young persons.

In the Metropolitan District, the children are in most cases examined for these certificates, free of charge, by the medical officers of the Department of Health, but in the country districts a fee is charged for such examination, and in some instances the fee has been as high as 10s. Now that the provisions of the Act have been extended to the whole of the State, it is desirable that some arrangement be made with the Department of Health, whereby the examination could be made by the Government medical officers in the country centres at a nominal charge of 2s. 6d. on production of the form furnished by the Department, accompanied by evidence of the child's age.

The following statement shows the number of cases in which special permission was granted by the Minister for boys and girls to work in factories during the last ten years:—

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1906 ...	232	83	315	1911 ...	182	6	188
1907 ...	306	135	441	1912 ...	154	4	158
1908 ...	213	121	334	1913 ...	160	9	169
1909 ...	248	148	396	1914 ...	152	8	160
1910 ...	179	7	186	1915 ...	143	6	149

Certificates

Certificates of Fitness and Permits to Work.

The following table shows the number of Certificates of Fitness and Permits to Work issued during the year 1915, and also the class of factory in which the children were to be employed :—

Certificates of Fitness issued during 1915.

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Western.		Goulburn.		Albury.		Other.	T
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females	Males.	
Artificial flowers	2	65	...	...	...	...	...	...	...	...	...	...	...	
Aerated waters	17	4	..	4	11	...	1	...	1	...	...	...	4	
Bedsteads, bedding	38	2	...	...	...	..	...	...	...	...	...	...	...	
Biscuits	272	142	18	8	...	...	...	...	...	...	...	...	...	
Bookbinding	9	185	...	...	...	...	...	...	...	...	...	...	...	
Boots and shoes	158	144	1	...	...	...	...	...	4	5	...	...	...	
Brass and copper	21	.....	1	...	...	...	...	...	...	...	...	...	...	
Bread and pastry	24	3	...	...	2	...	2	1	1	...	...	...	...	
Breweries	.. ...	.....	...	...	...	...	...	...	...	...	...	...	...	
Brooms	14	2	1	...	...	...	...	..	...	...	...	...	...	
Calico bags	12	16	...	...	...	...	...	...	...	...	...	...	...	
Cement and lime works	2	.....	...	...	...	...	...	..	...	...	...	...	...	
Chemicals and blue	47	49	...	..	...	...	...	...	...	...	...	...	...	
Clothing	40	422	12	63	...	...	...	...	9	2	...	...	...	
Coachbuilding	20	2	...	...	...	..	..	...	2	...	2	...	2	
Condiments	25	53	4	...	...	...	...	...	...	...	...	...	...	
Confectionery	69	85	8	10	...	...	...	...	...	...	...	...	...	
Dressmaking	4	425	...	...	...	...	...	...	...	...	...	...	...	
Electric light and power	6	.....	3	...	...	...	...	...	...	...	..	...	..	
Engineering	240	.. ...	55	...	...	...	28	...	...	...	...	...	4	
Flour mills	1	4	...	...	...	...	1	...	...	...	...	...	2	
Furniture	85	11	9	...	...	...	...	...	...	...	...	...	2	
Glass and bottles	39	.....	...	...	...	...	...	...	...	...	...	...	...	
Groceries and packing	113	37	3	2	...	...	...	...	...	...	...	...	...	
Hats and caps	65	135	...	24	...	...	...	...	.	...	..	...	...	
Hosiery and Knitting	1	39	...	...	...	...	...	...	...	...	...	...	...	
Ice and refrigerating	3	.....	...	...	..	...	3	...	...	...	...	...	3	
Ironworks, stoves, &c.	47	.....	...	...	1	...	...	...	...	...	...	...	...	
Jam	23	14	...	...	...	...	...	...	...	...	...	...	...	
Jewellery	17	4	1	...	...	...	..	...	...	...	...	...	...	
Kerosene and oil	8	.. ...	...	...	...	...	...	...	...	...	...	...	...	
Laundries	.....	32	...	8	...	..	...	...	...	...	...	...	...	
Leather bags, &c.	52	25	...	...	...	...	...	...	...	...	...	...	...	
Marble and slate	5	2	...	...	..	...	...	...	...	...	...	...	...	
Meat-preserving	19	5	...	...	1	...	...	...	...	...	...	...	7	
Motors and cycles	43	1	1	...	1	...	1	...	...	...	...	...	...	
Musical instruments	18	.....	...	...	...	...	...	...	...	...	...	...	...	
Paper boxes	42	86	...	...	...	...	...	...	...	...	...	...	...	
Paper mills	8	9	...	...	...	...	...	...	...	...	..	...	4	
Plumbers and tinsmiths	105	5	3	...	...	...	...	...	1	...	...	..	...	
Potteries and brickworks	27	.....	...	...	...	...	1	...	10	2	...	...	14	
Printing	406	40	15	...	5	...	...	...	...	...	...	...	...	
Rope	15	1	...	...	...	...	...	...	...	...	...	...	...	
Rubber goods	11	20	...	...	...	...	...	...	...	...	...	...	3	
Sawmills and joinery	157	1	22	6	...	...	1	...	...	...	...	...	...	
Shirts	1	157	1	6	...	...	...	...	...	...	...	...	...	
Smelting and ore works	45	.....	24	...	...	...	...	...	...	...	...	...	..	
Soap, &c.	37	27	20	3	...	...	1	...	...	...	...	...	...	
Sugar	.....	.....	...	...	...	...	...	...	...	...	...	...	...	
Tanneries	31	1	...	...	...	...	...	...	...	...	...	..	...	
Tents, &c.	5	6	...	...	...	...	...	...	...	...	...	...	...	
Tobacco	76	81	...	...	...	...	...	...	...	...	...	...	...	
Type-founding	5	4	...	...	...	...	...	...	...	...	...	...	...	
Umbrellas	11	8	...	...	...	...	...	...	...	...	...	...	...	
Woollen mills	79	97	...	...	...	...	...	...	4	...	...	...	1	
Wool-scouring	15	.. ...	...	...	...	...	...	...	...	...	...	...	...	
Wire works	32	2	...	..	...	...	...	...	...	...	...	..	...	
Miscellaneous	88	48	12	1	...	...	1	...	...	...	...	...	46	
Total	2,755	2,501	214	135	21	...	40	5	28	9	2	...		

Special Permits.

The number of these permits issued to children between the ages of 13 and 14 is 149, details of which appear below.

Metropolitan District—
Males 141
Females 6
—— 147

Newcastle District—
Males 2
Females ... ... —
—— 2

Western District—
Males ... ... Nil.
Females ... ... Nil.
—— Nil.

Broken Hill District—
Males ... ... Nil.
Females ... ... Nil.
—— Nil.

Goulburn District—
Males ... ... Nil.
Females ... ... Nil.
—— Nil.

Albury District—
Males ... ... Nil.
Females ... Nil.
—— Nil.

Total 149

Child Labour in Factories during Year 1915.

District.	Permits granted.		Certificates of Fitness.	
	Special to children between 13 and 14 years of age.	Temporary to children between 14 and 16 years of age.	Issued.	Declined.
Metropolitan	147	5,955	5,256	2
Goulburn	.....	37	37	.....
Albury	.....	2	2	.....
Newcastle	2	289	349	4
Western	.....	47	45	.....
Broken Hill	.....	10	21	.....
	149	6,340	5,710	6

Particulars of Special Permits during Year 1915.

Date of Permit.	Permittee.				Employment		
	Name.	Date of Birth.	Age.		Employer.	Locality.	Class of Factory.
			yrs.	mos.			
7/1/15	Hansen, Thomas	5/11/1901	13	2	Fielding, J., & Co.	Sydney	Cardboard boxes.
,,	Moore, Leslie	12/3/1901	13	9	Forster, S., and Sons	Ultimo	Iron bedsteads.
,,	McMahon, Thomas	1/5/1901	13	8	Elliott Bros., Ltd.	Balmain	Chemicals.
11/1/15	Tillock, Otto	28/2/1901	13	10	Newlands Bros., Ltd.	Sydney	Bedsteads.
15/1/15	Murray, William	28/11/1901	13	4	Solomons, S.	,,	Boots.
19/1/15	Kyneur, Elizabeth	2/2/1901	13	11	Vicars, John, & Co.	,,	Woollen mills.
20/1/15	Johnson, Carl	23/9/1901	13	3	Simmons, Ltd.	,,	Printing.
22/1/15	Flynn, Frank	5/10/1901	13	3	Epworth Printing and Publishing House Trust.	,,	,,
27/1/15	Cheth, Reginald	25/7/1901	13	6	Thomas, P. V.	,,	Boots.
,,	Stanborough, Elma	3/3/1901	13	9	Cohen, C. H. A.	,,	Tailoring.
28/1/15	Barnes, David	23/3/1901	13	10	Co-op. Box Co. of N.S.W., Ltd.	Balmain	Boxmaking.
29/1/15	Stewart, Matthias	26/2/1901	13	11	G. Hudson and Son, Ltd.	Glebe	Joinery.
3/2/15	Fraser, Norman	5/9/1901	13	4	Bennett and Wood, Ltd.	Sydney	Cycles.
,,	Fraser, Gilbert	,,	13	4	,, ,,	,,	,,
,,	Norman, Louis	14/3/1901	13	10	Clyde Engineering Co.	Clyde	Engineering.
5/2/15	O'Mara, Stanley	17/3/1901	13	10	Forster, S., and Sons	Ultimo	Iron bedsteads.
,,	McLaughlin, Francis	5/5/1901	13	9	A. Hordern and Sons, Ltd.	Sydney	Furniture.
,,	Jones, Benjamin	10/12/1901	13	1	,, ,,	,,	Bedsteads.
,,	Stuart, Frederick	14/12/1901	13	1	British Australian Tobacco Co., Ltd.	Kensington	Tobacco.
8/2/15	Lee, Joseph	6/9/1901	13	5	Goodlet and Smith, Ltd.	Granville	Bricks and tiles.
9-2-15	Marshall, William	21/10/1901	13	3	Hughes, Richard	Glebe	Canister making.
,,	Law, Henry	2/4/1901	13	10	Beck and Son	Pyrmont	Wood turning.
,,	Jones, William	30/5/1901	13	8	Stanmore Preserving Co.	Stanmore	Condiments.
12/2/15	Roek, Heetor	3/11/1901	13	3	Crabb, Harry	Sydney	Tinsmith.
,,	Hanna, Arthur	17/3/1901	13	10	Griffiths Bros., Pty., Ltd.	,,	Tea packing.
15/2/15	Colquhon, Heetor	4/11/1901	13	3	Haekshall's, Ltd.	Maseot	Biscuits.
16/2/15	Wilkie, Samuel	29/4/1901	13	9	Simmons Bros.	Sydney	Printing.
17/2/15	Maxted, Frederiek	6/7/1901	13	7	Not stated.	.....	.....
,,	Leich, Raymond	6/4/1901	13	10	Hardman Bros., Ltd.	Newtown	Biscuits.
,,	Conlon, Leslie	12/10/1901	13	4	Arnott, Wm., Ltd.	Homebush	,,
,,	O'Brien, William	8/3/1901	13	11	,, ,,	,,	,,
18/2/15	Dillon, Edward	10/6/1901	13	8	Elliott Bros., Ltd	Balmain	Chemicals.
24/2/15	Hall, John	7/3/1901	13	11	Austral Chair Co.	Sydney	Furniture.
,,	Burns, Cecil	25/6/1901	13	7	Arnott, Wm., Ltd.	Homebush	Biscuits.
26/2/15	Flint, Stanley	24/5/1901	13	9	Madeley, T. S.	Sydney	Furniture.
1/3/15	Mason, Francis	11/2/1902	13	0	Burnet, A. H., & Co., Ltd.	,,	Condiments.
2/3/15	Dobson, Charles	12/9/1901	13	5	N.S.W. Canning Co. (C. Barnes).	,,	Bacon curing.
,,	Shipp, Edgar	20/3/1901	13	11	Ford, D. S.	,,	Printing.
6/3/15	Thompson, Henry	23/6/1901	13	8	Stanmore Preserving Co.	Stanmore	Condiments, &c.
8/3/15	Roeder, George	31/8/1901	13	6	Bennett and Barkell	Sydney	Cycles.
9/3/15	Roland, Jaek	31/7/1901	13	7	Arnott, Wm., Ltd.	Homebush	Biscuits.
,,	Jonas, Lewis	23/2/1902	13	0	Not stated	.....	.....
12/3/15	O'Halloran, Jane	2/7/1901	13	8	Murray, Thos., Son, & Co.	Alexandria	Hosiery.
16/3/15	Grief, Arthur	18/4/1901	13	10	Forster, S., and Sons	Ultimo	Iron bedsteads.
,,	McGlinchy, John	9/11/1901	13	4	Sands, John, Ltd	Sydney	Printing.

PARTICULARS OF SPECIAL PERMITS DURING YEAR 1915.—*continued.*

Date of Permit.	Permittee.			Employment		
	Name.	Date of Birth.	Age.	Employer.	Locality.	Class of Factory.
			yrs. mos.			
18/3/15	Allen, James	30/6/1901	13 8	Heiron and Smith	Newtown	Billiard tables.
23/3/15	Batey, Henry	6/4/1901	13 11	Andrew, J., & Co.	Sydney	Printing.
,,	Baster, James	17/2/1902	13 1	Dunn, H. T., & Co.	,,	,,
,,	Davis, Ivy	13/1/1902	13 2	Australian Woollen Mills	Marrickville	Woollen mills.
24/3/15	Gain, George	24/5/1901	13 10	Hardman Bros., Ltd.	Newtown	Biscuits.
,,	Bourke, Francis	27/4/1901	13 10	Mauri Bros. and Thomson	Sydney	Corks.
26/3/15	Lever, Bessie	16/4/1901	13 11	Arnott, Wm., Ltd.	Homebush	Biscuits.
31/3/15	King, Thomas H.	31/10/1901	13 5	Abel & Co., Ltd.	Newtown	Bakery.
1/4/15	Smith, Edward V.	10/7/1901	13 8	Websdale, Shoosmith, Ltd.	Sydney	Printing.
,,	McDonald, William	14/10/1901	13 5	Day, Son, and Harris	Newtown	Boots.
,,	Dean, Ernest A.	4/6/1901	13 9	Ambler, R. E.	Sydney	Printing.
7/4/15	Bock, Leslie C.	3/7/1901	13 9	Smith, W. E., & Co., Ltd.	,,	,,
,,	Foster, William	25/7/1901	13 8	Bushell's, Ltd.	,,	Tea-packing.
12/4/15	Solomon, Neville	23/10/1901	13 5	Excelsior Printing Works	,,	Printing.
16/4/15	Galand, Victor S.	22/6/1901	13 9	Sargents, Ltd.	,,	Baker.
22/4/15	Quinlan, Ernest J.	24/7/1901	13 8	R. Hughes	Glebe	Tinware.
27/4/15	Cook, Henry W.	15/6/1901	13 10	John Sands, Ltd.	Sydney	Printing.
28/4/15	Osborne, Harold	22/5/1901	13 11	Mauri Bros. and Thomson	Waterloo	Engineering.
,,	Rowan, John D.	8/2/1902	13 10	Hardman Bros.	Newtown	Biscuits.
4/5/15	Couper, Douglas	28/8/1901	13 10	W. Arnott, Ltd.	Homebush	,,
,,	Murray, John	7/10/1901	13 6	Ford Sherington, Ltd.	Sydney	Leather bags.
6/5/15	Stevenson, John	1/6/1901	13 11	Quirk's Lighting and Engineering Co., Ltd.	Alexandria	Electrical engineering.
11/5/15	Shephard, Frederick	11/3/1902	13 2	Upton & Co.	,,	Soap.
,,	Wilson, Bruce	1/6/1901	13 10	D. Solomons	Sydney	Clothing.
12/5/15	Whitbread, Adolphus	18/9/1901	13 7	Ford and Kent	,,	,,
17/5/15	Greig, Cecil	20/9/1901	13 7	Fuerth and Nall, Ltd.	,,	Cardboard boxes.
,,	Fleming, Mervyn	14/10/1901	13 6	W. Arnott, Ltd.	Homebush	Biscuits.
18/5/15	Broadbent, Benjamin	23/9/1901	13 7	W. J. Grant	Sydney	Jewellery.
20/5/15	Lock, William	30/8/1901	13 8	L. J. Bowen	Waterloo	Boots.
21/5/15	Ellean, Dellina	10/6/1901	13 11	W. Arnott, Ltd.	Homebush	Biscuits.
27/5/15	Curren, Alfred	9/2/1902	13 3	Charles Gow	Annandale	Joinery.
,,	Hammond, Denis	16/7/1901	13 10	Standard Paint Co.	Pyrmont	Paint.
28/5/15	Smith, Cecil	21/7/1901	13 10	Hardman Bros., Ltd.	Newtown	Biscuits.
31/5/15	Quinlan, William	6/9/1901	13 8	British Australian Tobacco Co.	Kensington	Tobacco.
24/6/15	Becker, William	9/10/1901	13 8	Commonwealth Handkerchief Co.	Sydney	White work.
26/6/15	Stewart, John	15/8/1901	12 10	Mauri Bros. and Thomson	,,	Corks.
29/6/15	Bird, Clifford	17/2/1902	13 4	John Andrews	,,	Printing.
,,	Gilmore, Horace	25/3/1902	13 3	Hardman Bros.	Newtown	Biscuits.
5/7/15	Baker, John	4/12/1901	13 7	Sands, John, Ltd.	Sydney	Printing.
12/7/15	O'Brien, Patrick	30/10/1901	13 8	Hughes, R.	Forest Lodge	Canister works.
,,	Smith, Charles	23/11/1901	13 7	Penfold, W. C., & Co.	Sydney	Printing.
,,	Hughes, William	17/3/1902	13 3	Australian Patent Lamp Co.	,,	Lamps.
14/7/15	Hill, Frederick	31/10/1901	13 8	Love, J. R., & Co., Ltd.	,,	Tea packing.
19/7/15	Burns, Charles	23/11/1901	13 7	Dillon, Burrows & Co.	,,	Confectionery.
,,	Castle, Norman	14/8/1901	13 11	Aulsebrook and Sons	Sydney	Biscuits.
23/7/15	Swan, William	7-12-1901	13 7	Lever Bros., Ltd.	Balmain	Soap.
26/7/15	Sutton, John	6/5/1902	13 2	Samson's Wire Netting Co.	Camperdown	Wire-netting.
29/7/15	Hansen, Alexander	27/9/1901	13 10	Christie, W.	Sydney	Umbrellas.
30/7/15	Clark, Cecil	7/2/1902	13 5	Carrington & Co., Ltd.	Glebe	Confectionery.
4/8/15	Elder, James	15/1/1902	13 7	Asti Studios	Sydney	Photography.
9/8/15	Alting, Henry	30/10/1901	13 9	Aulsebrook and Sons, Ltd.	,,	Biscuits.
10/8/15	Sellen, William	30/9/1901	14 0	Fuerth and Nall, Ltd.	,,	Cardboard boxes.
14/8/15	Craig, Sydney	1/4/1902	13 4	Sulphide Works	Newcastle	Smelting ores.
27/8/15	Lowry, Ernest	28/12/1901	13 8	Catholic Press Newspaper Co., Ltd.	Sydney	Printing.
31/8/15	Exton, Ernest	9/11/1901	13 10	Lysaght Bros. & Co., Ltd.	,,	Wire-netting.
1/9/15	Openshaw, A.	27/8/1902	13 0	John Cook & Co., Pty., Ltd.	Sandown	Meat-packing.
,,	Mattingly, L.	29/11/1901	13 10	R. and B. Ogden	Sydney	Furniture.
3/9/15	Jones, J.	1/11/1901	13 10	Griffiths Bros. Pty., Ltd.	,,	Tea-packing.
,,	Moore, H.	15/12/1901	13 9	Jacobs, Nathan & Co.	,,	Tailoring.
,,	Kiernan, C.	14/4/1902	13 5	John Danks and Son, Pty., Ltd.	,,	Engineering.
8/9/15	Muddle, G.	12/3/1902	13 6	Samson Manufacturing Co., Ltd.	,,	Tinware.
10/9/15	Russell, J.	28/10/1901	13 11	P. McWilliams	Botany	Wool-scouring.
,,	Baroni, L.	3/2/1902	13 7	Elliott Bros., Ltd.	Sydney	Chemicals.
,,	Ambrose, R.	1/1/1902	13 8	Mauri Bros. and Thomson, Ltd.	,,	Corks.
13/9/15	Jones, W.	13/12/1901	13 9	James Stedman	,,	Confectionery.
14/9/15	Brennan, R.	4/5/1902	13 4	Australian Woollen Mills, Ltd.	,,	Woollen mills.
15/9/15	Harris, G.	20/10/1901	13 11	Bayley and Sons, Ltd.	,,	Leather goods.
22/9/15	Loneragan, C.	20/10/1901	13 11	S. T. Leigh & Co.	,,	Printing.
23/9/15	Barron, T.	26/11/1901	13 10	J. Evans and Sons Printing Co.	,,	,,
,,	Wilson, B.	4/12/1901	13 10	H. Holbeach	,,	Rope.
28/9/15	Sutcliffe, W.	28/8/1902	13 1	Brent and Wilson	,,	Saddlery.

PARTICULARS OF SPECIAL PERMITS DURING YEAR 1915—*continued.*

Date of Permit	Permittee.				Employment.		
	Name.	Date of Birth.	Age.		Employer.	Locality.	Class of Factory.
			yrs.	mos.			
28/9/15	Ross, D.	2/12/1901	13	10	A. Forsyth & Co. Ltd.	Sydney	Rope.
30/9/15	Gill, C.	28/8/1902	13	1	United Wire Nail Manufacturing Co.	,,	Wire nails.
,,	Riley, E.	16/11/1901	13	11	Waterloo Glass Works, Ltd.	Waterloo	Glass.
6/10/15	Small, Horace	15/11/1901	13	10	H. Small & Co.	Sydney	Confectionery.
,,	Mulheron, Robert	3/3/1902	13	7	Wormald Bros.	Waterloo	Engineering.
8/10/15	Amedo, Ferdinand	22/3/1902	13	6	Harry Crooks	Redfern	Furniture.
9/10/15	Cummings, Leslie	5/6/1902	13	4	Mauri Bros. and Thomson, Ltd.	,,	Corks.
3/10/15	Gately, Elliott	27/6/1902	13	3	John Vicars & Co., Ltd.	Marrickville	Woollen mills.
5/10/15	Wright, Joseph	8/5/1902	13	5	Tooth & Co., Ltd.	Sydney	Bottling aerated waters.
6/10/15	Braiding, Alfred	28/2/1902	13	7	National Pure Food Co., Ltd.	Sydney	Grocers' supplies.
5/10/15	Mulholland, Maurice	16/3/1902	13	7	Stevens Bros. & Co.	Surry Hills	Joinery.
,,	Gibson, Walter	1/2/1902	13	8	S. E. Lees	Sydney	Printing.
1/11/15	McRitchie, William	4/6/1902	13	5	D'Arcy, C., & Co.	,,	Bottling spirits.
,,	Cairns, James	5/2/1902	13	8	McKenzie, H., Ltd.	,,	Boxmaking.
2/11/15	Jenkins, Thomas	7/2/1902	13	8	Sands, John, Ltd.	,,	Printing.
9/11/15	Mackie, Hector	7/1/1902	13	10	Bennett, S.	,,	,,
,,	Sinclair, Andrew	6/12/1901	13	11	,,	,,	,,
,,	Miller, George	8/1/1902	13	10	,,	,,	,,
2/11/15	McNeill, Keith	24/1/1902	13	9	Fisher & Co.	,,	Bottling medicines.
5/11/15	Macintosh, Henry	13/10/1902	13	1	Evans, J., & Son Printing Co.	,,	Printing.
5/11/15	Fenton, Henry	21/4/1902	13	6	Wills, W. D. & H. O. (Aust.), Ltd.	,,	Tobacco.
4/11/15	Jones, Gilbert	29/12/1901	13	10	Davies and Carrington	Newcastle	Printing.
,,	Cason, Ronald	30/4/1902	13	6	Sands, John, Ltd.	Sydney	,,
3/12/15	Peacock, Stanley	2/5/1902	13	7	Australian Woollen Mills, Ltd.	Marrickville	Woollen mills.
1/12/15	Holdaway, Leslie	20/9/1902	13	2	S. Gordon and Sons.	Sydney	Shirtmaking.
3/12/15	Butler, Victor	15/5/1902	13	6	Wellman, E.	Alexandria	Bamboo and wicker.
9/12/15	Hallwood, James	28/1/1902	13	10	Merchants and Traders Association, Ltd.	Sydney	Printing.
7/12/15	White, Reginald	7/2/1902	13	10	David Jones, Ltd.	Sydney	Furniture.
8/12/15	Witheridge, Edward	12/8/1902	13	4	Wm. Arnott Ltd.	Homebush	Biscuits.
4/12/15	Neilson, Alfred	14/7/1902	13	5	Australian Woollen Mills, Ltd.	Marrickville	Woollen mills.
7/12/15	Coghlan, James	22/1/1902	13	10	J. R. Love & Co.	Sydney	Tea packing.
0/12/15	Walker, Richard	1/11/1902	13	1	Bennett and Wood	,,	Cycles.
6/12/15	Marshall, Alfred	12/2/1902	13	10	Sydney Glass Bottle Works	Waterloo	Glass bottles.

ACCIDENTS IN FACTORIES.

The return of accidents is compiled to the end of the year, and it is satisfactory to report that the number in the Metropolitan District shows a further decrease on the figures for 1914, being 355 in 1915, compared with 390 in 1914, while the number in 1914 showed a decrease on those for 1913, which amounted to 455. From these figures it will be seen that there is a decrease of 100 between the figures of 1913 and those for 1915, equal to 22 per cent.

Six accidents proved fatal.

On the 20th January, at a stove factory in Annandale, a man, aged 29, was carrying a ladle containing about 50 lb. weight of molten metal, when he stumbled, and losing his balance, bumped the ladle on the ground. Some of the metal splashed up and entered his mouth and throat, inflicting injuries from which he died at the Prince Alfred Hospital on the 7th February. The ladle was in good order and condition. At the inquest a verdict of accidental death was returned.

At the Electrolytic Refining and Smelting Company's Works at Port Kembla, on the 13th April, a man, aged 43, was killed through being struck on the head by an iron hammer, the head of which flew off the handle whilst being used by another employee. The hammer was tight on the handle when he started to strike, and came off without any warning. At the inquest an open verdict was returned.

At a furniture factory in Redfern, on the 14th May, a lad 17 years of age met his death through falling down the lift well. No one witnessed the accident, but it is surmised that he opened the gate, and in leaning over to pull the wire, overbalanced and fell. A verdict of accidental death was returned.

A second accident occurred at the Electrolytic Refining and Smelting Company's Works at Port Kembla, on the 28th May, when a man, aged 32, received severe burns on the head, face and body, by an explosion of hot matte in an iron pan. He died in the Wollongong Hospital on the 4th June.

On the 24th August, a girl aged 20, employed at a rubber works, received severe scalds and burns, the result of an explosion of a vulcanizer, from which she died. Four other employees were more or less severely injured. An exhaustive inquiry was held and a verdict of accidental death returned.

At a suburban sawmill, the sawyer, aged 34 years, received internal injuries on the 17th November, from which he died on the 24th idem. He was cutting palings at the circular saw, when one broke, and a part being caught on the saw was thrown towards the sawyer, inflicting internal injuries. The saw was guarded at the time of the accident.

The following statements give the details of the number of accidents in the Metropolitan, Newcastle, Western, and other districts, the description of the machine at which the accident occurred, and the extent of the injuries received ;—

Metropolitan District.

Class.	Accidents resulting in injury to—						Fatal. Accidents.	Total.
	Hands.	Arms.	Legs.	Feet.	Head.	Body.		
Bags and sacks	3	...	...	...	...	...	...	3
Boots and shoes	11	1	...	...	...	...	...	12
Brickworks	2	...	...	1	...	...	...	3
Cement	...	...	...	...	2	...	...	2
Chemicals	1	1	...	1	...	1	...	4
Coachbuilding	1	...	...	...	1	...	...	2
Dyeworks	1	...	...	...	...	...	...	1
Engineering	33	3	...	7	6	2	...	51
Food and drink	33	2	...	4	1	1	...	41
Gas	...	1	...	...	..	...	...	1
Hats and caps	3	2	...	...	...	...	...	5
Joinery	9	1	...	...	...	...	...	10
Laundries	8	...	...	1	...	...	...	9
Leather	1	...	...	...	1	...	...	2
Metal	29	3	...	3	4	2	1	42
Oils	2	2	...	...	...	1	...	5
Printing	38	...	...	2	...	...	...	40
Refrigerating	1	...	...	...	...	...	...	1
Ropeworks	2	2	...	...	...	...	...	4
Rubber	5	...	...	...	2	5	1	13
Shirts	1	...	...	...	...	...	...	1
Smelting	...	...	...	...	...	...	2	2
Stone, clay, and glass	...	1	...	..	1	...	...	2
Tanneries	5	1	..	...	..	1	...	7
Tin canister	11	..	...	...	..	...	..	11
Tobacco	1	...	...	...	..	...	...	1
Woodwork	54	3	...	1	3	2	2	65
Woollen mills	3	...	...	...	...	1	...	4
Woolscouring	2	...	...	...	...	...	...	2
Miscellaneous	4	1	...	...	3	1	...	9
Total	264	24	...	20	24	17	6	355

DESCRIPTION of Machines at, and causes through, which Accidents occurred.

ag and Sack Machines—
- Printing machine 1
- Sewing machines 2

Boot and Shoe Machines—
- Cutting presses 2
- Emery wheel 1
- Grindstone 1
- Heel trimmers 2
- Heeling machine 1
- Pounding machine..... 1
- Power press..... 1
- Skiving machine..... 1
- Splitting machines ... 2

Brick and Tile Machines—
- Conveyor 1
- Grinding pan 1
- Ridge tile machine ... 1

Chemical Machines—
- Mixer 1

Sewing Machines—
- Mangle.. 1

Engineering and Metal-working Machines—
- Angle iron bender 1
- Band saw 1
- Barbed wire machine... 1
- Bending rolls 1
- Body-forming machine 1
- Bolt header 1
- Closer 1
- Crane 1
- Dressing machine 1
- Drilling machines 3
- Emery wheels 8
- Grindstone 1
- Guillotines 2
- Guttering machine ... 1
- Lathes 12
- Lid straightener 1
- Metal hack saw 1
- Mould presser 1
- Powder mixer..... 1
- Power presses..... 13
- Punch and shears 1
- Punching machines ... 5
- Riveting machine 1
- Screwing machine..... 1
- Shapers 4
- Sheet rollers 1

Engineering and Metal-working Machines (*continued*)—
- Steam hammers 2
- Swaging machine 1
- Tin notching machine... 1
- Tin stamping machines 3
- Toe puff press 1
- Wire-coiling machine.. 1
- Wire-winding machine 1
- Label-cutting machine 1
- Litho machines 2
- Platens.. 7
- Printing machines..... 3
- Presses 4
- Punching machine..... 1
- Rotary printer 1
- Stamping machine..... 1
- Stringing machine..... 1
- Wire-stitching machines 7

Food and Drink Machines—
- Biscuit machines 2
- Bottling machines..... 1
- Caramel machines 2
- Crown cork machines 1
- Dough breaker 1
- Dough dividers 2
- Dough stamper 1
- Elevators 2
- Guillotine 1
- Ice saw..... 1
- Mincing machines..... 2
- Mixing machine 1
- Pasteurising machines 2
- Pasting machine 1
- Peeling machine..... 1
- Presses 4
- Refrigerating machine 1
- Rollers 3
- Screw conveyors 2
- Tea-packing machine... 1
- Taking-off machine ... 1

Gas Works—
- Coal crusher 1

Hat and Cap Machines—
- Fur-forming machine... 1
- Proofing machine 1
- Shaving machine 1
- Steaming machine..... 1

Laundry Machines—
- Body ironer 1
- Calenders..... 5
- Collar machine 1
- Starching machine..... 1
- Wooden rollers 1

Leather Machines—
- Moulding machine..... 1
- Power press 1

Oils and Grease—
- Drying fan 1
- Mixer 1

Paper Mills—
- Calenders 2
- Bag-making machine.. 1

Printing and Cardboard Box Machines—
- Armoury press 1
- Bag-making machines 2
- Binder 1
- Box-ending machine ... 1
- Corner-cutting machines 2
- Cylinder 1
- Envelope machine 1

Rope-working Machines—
- Drawer machines 2
- Reversing machine ... 1
- Traveller 1

Rubber-working Machines—
- Dough-Mixing machine 1
- Eyeletting machine ... 1
- Rollers 1
- Tubing machine..... 1
- Vulcanizer 7
- Wrapper machine 1

Shirt-making Machines—
- Sewing machine..... 1

Tanning and Woolscouring Machines—
- Carding machine 1
- Devil..... 1
- Drum cogs 1
- Leather-rolling machine 1
- Planing machine 1

Tanning and Woolscouring Machines—*contd.*
- Scouring machine 1
- Setting-out machines... 2

Tobacco-working Machines—
- Cutting machine 1

Wood-working Machines—
- Band saws 3
- Boring machine 1
- Circular saws 35
- Cross-cut saw..... 1
- Drilling machine 1
- Jointing machines..... 6
- Lathe 1
- Morticing machines ... 3
- Moulding machines ... 3
- Pendulum saw 1
- Planing machines 8
- Rip saws 2
- Rollers 1
- Sandpaperers 2
- Shaping machines 3
- Spindle saws 2
- Tenoning machine..... 1
- Winch 1

Woollen Mills—
- Carding machine 1
- Loom..... 1
- Machine cogs 1
- "Mule" 2
- Other machine 1

Miscellaneous—
- Bursting bottles..... 4
- Caustic soda 2
- Dye vat 1
- Electric switches 2
- Fall 1
- Falling iron..... 1
- Hot bitumen 1
- Hot oil 1
- Hot solution 1
- Hot sugar 1
- Hot water 5
- Lifts and elevators ... 4
- Mill gearing 17
- Molten metal 16
- Muriatic acid..... 1
- Nail in floor 1
- Nitric acid 1
- Sulphuric acid 1

Total.....355

EXTENT of Injuries received.

Total 6

Partially disabled—
- Loss of parts of fingers 54
- ,, arm 1
- ,, part of arm 2
- ,, fingers 11

Broken limbs—
- Broken finger 5
- ,, leg..... 2
- ,, arm 5
- ,, toe..... 1

Temporary (cuts, lacerations, and bruises)—
- On hands 184
- ,, arms 15
- ,, body 8
- ,, head 12
- ,, feet 7

Burns and scalds 35

Shock 5

Injury to eye 2

Total 355

Newcastle District.

Class.	Accidents resulting in injury to—						Fatal Accidents.	Total.
	Hands.	Arms.	Legs.	Feet.	Head.	Body.		
Engineering	4	...	...	1	...	4	...	9
Food and drink	2	2	...	1	...	...	1	6
Joinery	1	...	...	...	...	1	...	2
Laundries	1	...	...	...	...	...	...	1
Smelting	1	2	...	1	1	...	...	5
Woodworking	9	...	...	...	...	...	...	9
Miscellaneous	...	...	...	1	...	1	...	2
Total	18	4	...	4	1	6	1	34

DESCRIPTION of Machines at, and causes through, which Accidents occurred.

Engineering and Metal-working Machines—
- Bolt-cutting machine 3
- Hoistway 1
- Planing machine 1
- Rolling table 1

Food and Drink Machines—
- Bottle-washing machine 1
- Bottling machine 1
- Biscuit machine 1
- Dough mixer 1
- Pump 1

Laundries—
- Body ironer 1

Wood-working Machines—
- Buzz saw .....
- Circular saws .....
- Edging saw .....
- Jointing machine .....
- Lathe .....
- Spindle machine .....

Miscellaneous—
- Furnaces .....
- Hot slag .....
- Hot tallow .....
- Mill gearing .....
- Steam pipes .....

Total .....

EXTENT of Injuries received.

Fatal 1

Partially disabled—
- Loss of fingers 1

Burns and Scalds 7

Temporary—
Cuts, lacerations, bruises &c.,—
- On hands 1
- On arms .....
- On body .....
- On head .....
- On feet .....

Total 3

Western District.

Class.	Accidents resulting in Injury to—						Fatal Accidents.	Total.
	Hands.	Arms.	Legs.	Feet.	Head.	Body.		
Cement	.....	.....	.....	.....	.....	.....	1	1
Engineering	6	.....	.....	2	2	1	.....	11
Metal	6	1	.....	4	.....	1	1	13
Woollen mills	1	1	.....	.....	.....	.....	.....	2
Miscellaneous	1	.....	.....	4	2	1	.....	8
Total	14	2	.....	10	4	3	2	35

DESCRIPTION of Machines at, and causes through, which Accidents occurred.

Engineering and Metal-working—
- Angle iron bender 1
- Cranes 3
- Emery wheel 1
- Gantry hoists 3
- Grindstone 1
- Ingot stripper 1
- Mills 3
- Rail ending machine 1
- Rolling machine 1
- Punching machine 1
- Shearing machines 5

Engineering and Metal-working (*continued*)—
- Steam hammer .....
- Winding drum .....

Woollen Mills—
- Looms .....

Miscellaneous—
- Electric shock .....
- Gauge glass .....
- Limestone skip .....
- Molten metal .....

Total .....

EXTENT of Injuries received.

Fatal 2

Partially disabled—
- Loss of parts of fingers 4
- Loss of finger 1

Broken limbs—
- Broken leg 1
- Broken arm 2

Temporary—
Cuts, lacerations, bruises, &c.—
- On hands .....
- On arms .....
- On head .....
- On feet .....

Burns and scalds .....
Shock .....
Fractured rib .....

Total .....

Broke

Broken Hill.

Class.	Accidents resulting in Injury to—						Fatal Accidents.	Total.
	Hands.	Arms.	Legs.	Feet.	Head.	Body.		
Food	1	.....	.....	.....	.....	.....	.....	1
Wood-working	2	.....	.....	.....	.....	.....	.....	2
Total	3	.....	.....	.....	.....	.....	.....	3

DESCRIPTION of Machines at, and causes through, which Accidents occurred.

Food and Drink Machines—		Wood-working Machines—	
Sausage machine	1	Band saw	1
		Planer	1
		Total	3

EXTENT of Injuries received.

Partially disabled	1	Temporary—	
		Cuts, lacerations, bruises, &c., on hands	2
		Total	3

Other Country Districts.

Class.	Accidents resulting in Injury to—						Fatal Accidents.	Total.
	Hands.	Arms.	Legs.	Feet.	Head.	Body.		
Stone, clay, and glass	.....	.....	.....	.....	.....	1	.....	1
Woodworking	1	.....	.....	.....	.....	.....	.....	1
Miscellaneous	.....	.....	.....	1	1	1	.....	3
Total	1	.....	.....	1	1	2	.....	5

DESCRIPTION of Machines at, and Causes through, which Accidents occurred.

Brick and Tile Machines—		Miscellaneous—	
Polishing machine	1	Elevators	2
Woodworking Machines—		Falling log	1
Planer	1	Total	5

EXTENT of Injuries received.

Temporary—		Fractured ribs	1
Cuts, lacerations, bruises, &c.—		Total	5
On hands	1		
,, body	1		
,, head	1		
,, feet	1		

FIRE ESCAPES IN FACTORIES.

Special attention is still being given to this very important matter, and every possible assistance is rendered to the Department by the Chief Officer of Fire Brigades and his staff. During the year 59 reports were received from the Chief Officer of Fire Brigades that means of escape had been provided in various premises in the city and suburbs which fulfilled the requirements of section 39 of the Factories and Shops Act.

OVERTIME IN FACTORIES.

A large amount of overtime was worked during the year, principally in those factories which were engaged to a great extent in the manufacture of supplies for the Commonwealth Defence Department.

During the year permission was granted by the Minister for Labour and Industry for the working of additional overtime in terms of Section 43 in the case of 14 factories, affecting 330 females. The following statement shows the class of factory in which the additional overtime was worked:—

Clothing	...	6 cases	affecting	226 females.
Condiments	...	1 case	,,	5 ,,
Hats and caps	...	1 ,,	,,	8 ,,
Printing	...	3 cases	,,	60 ,,
Rubber Works	...	1 case	,,	18 ,,
Jam	...	1 ,,	,,	9 ,,
Trunks, &c.	...	1 ,,	,,	4 ,,

During

Prosecutions.

During the year there were 410 informations laid for various breaches of the Factories and Shops Act; convictions were obtained in 387 cases, nine being dismissed, and fourteen withdrawn.

The following are details of the convictions:—

Metropolitan District.

Section 7.	—Being in occupation of an unregistered factory...	7 cases.
„ 14.	—Failing to exhibit time sheet, &c.	5 „
„ 20.	—Failing to keep premises in cleanly state ...	8 „
„ 33.	—Failing to fence mill-gearing, &c.	53 „
„ 34.	—Failing to fence dangerous machinery	15 „
„ 37.	—Allowing female to have charge of lift... ...	1 „
„ 38.	—Failing to report accident	5 „
„ 39.	—Failing to provide fire-escape	3 „
„ 40.	—Employing children under 14 without permission	2 „
„ 41.	—Employment at prohibited machines	4 „
„ 42.	—Employment for over five hours without interval	4 „
„ 43.	—Breaches of overtime provisions	97 „
„ 44.	—Employment in restricted parts of factory ...	2 „
„ 45.	—Employment of persons without certificates ...	57 „
„ 49.	—Employment outside hours of furniture factories	18 „
„ 56.	—Failing to comply with order	1 „
„ 68.	—Failing to pay tea-money	17 „
Regulation 15.	—Insufficient w.c. accommodation	6 „
„ 16.	—Insufficient lavatory accommodation	3 „
„ 19(5)	Boy under 18 in charge of boiler	1 „
„ 19(7)	Employing girls near machinery with hair loose	6 „

Newcastle District.

Section 7.	—Being in occupation of an unregistered factory	4 cases.
„ 20.	—Failing to keep premises in cleanly state ...	6 „
„ 26.	—Failing to provide seating accommodation ...	1 „
„ 33.	—Failing to fence mill-gearing, &c.	9 „
„ 38.	—Failing to report accident	2 „
„ 43.	—Breaches of overtime provisions	10 „
„ 45.	—Employing child without certificate	1 „
Regulation 15.	—Insufficient w.c. accommodation	1 „
„ 16.	—Insufficient lavatory accommodation	6 „

Western District.

Section 20.	—Failing to keep premises in cleanly state ...	2 cases.
„ 33.	—Failing to fence mill-gearing, &c.	2 „
„ 38.	—Failing to report accident	9 „
„ 43.	—Breaches of overtime provisions	10 „
„ 45.	—Employing children without certificates ...	5 „
„ 68.	—Failing to pay tea-money	2 „
„ 69.	—Failing to keep overtime record	1 „

Goulburn District.

Section 45.	—Employing child without certificate	1 case.
	Total	387 cases.

Conclusion.

In conclusion I desire, on behalf of the officers of the Department, to thank the Department of Public Health, the Chief Officer of Fire Brigades and his staff, the Inspector-General of Police, the City and Suburban Municipal Councils, and other bodies who have so readily assisted in securing a reasonable compliance with the provisions of the Factories and Shops Act and Regulations.

Mr.

Mr. Superintending Inspector W. I. Taylor reports:—

One of the pointed effects of the present war is that during the past year the ratio of improvement in the general condition of factories was not up to the level of the immediately preceding years. This is undoubtedly attributable to the check on building which occurred on the outbreak of the war. As mentioned in previous reports, further action was stayed in many instances where negotiations had so far advanced that plans and specifications for new factory premises, or for large and extensive alterations, had been prepared and tenders called for. The declaration of war, however, had the immediate effect of tying up almost all matters which were of a speculative nature, and a large number of others which were dependent on outside financial assistance. Some new factory buildings were, however, completed during the year, and in some of the older buildings beneficial alterations have been made, whereby the sanitary conditions have been much improved. Whilst it may be said that the general conditions of factories is still on the up-grade, the serious check in the building trade, combined with the trade depression, has tended to hinder the good general advancement in the structural condition of factories which formerly obtained.

Much has been said in previous reports in reference to the safeguarding of machinery. Employers have had these important provisions of the Act brought under their notice so often by periodical visits of inspectors, and by frequent prosecutions, that it is really surprising there is so much neglect on the part of some factory occupiers to comply with these provisions. One would imagine that even if the humanitarian side did not appeal to them, they would try to avoid legal liabilities with regard to compensation to the injured person in case of accident, apart from the liability to penalty under the Act for breaches of these provisions. With the larger firms the management is necessarily compelled to rely on overseers and foremen for the erection and maintenance of safeguards, and an inspector often finds that the "omission" is due to the negligence of the foreman, and many and varied are the explanations given why parts of machinery which should have been protected are not so protected. Perhaps it is that a part has been guarded and the guard has been removed by the employee, and probably found lying about somewhere other than where it should be. In other cases, perhaps, a machine has been moved, and the fence which was previously on it has not been replaced, or perhaps it is that new machinery has been put in and the fencing of it overlooked. In the great majority of factories, however, there is ample evidence of the desire of employers to obtain a good standard of safety. Many occupiers welcome the suggestions of inspectors in this respect, as they readily recognise that if, for no other reason than a business point of view, such suggestions are in their interest. Speaking generally, it may be said that the standard of fencing is well maintained. During the year very few accidents happened in the portions of the district in which I was inspecting. Of these, the following may be mentioned:—

In a moderately-sized factory an urn is provided for hot water for use of employees at lunch time. The urn is a movable one, and is heated on a gas ring. At luncheon time a girl went with a "billy" to the urn for hot water, and whilst waiting for the "billy" to fill, she hung it on the tap of the urn. As the "billy" filled, the urn got lighter and eventually overbalanced, and the hot water fell on the girl's legs and feet, resulting in scalds.

In a printing office a young man was printing "foot rules" on wood on a platen machine. In attempting to recover a piece of wood which had fallen in the machine, his hand was caught between the platen and the "chase"; the second and third fingers of the left hand were crushed.

Another accident happened at a platen machine through the operator attempting to recover a "slip." Fortunately, the machine was a slow-motion one, and the operator was able to apply the brake in time to prevent a serious injury. As it was, his arm was badly bruised.

Two men in a jam factory were badly scalded through the carelessness of a fellow employee. A steam-jacketed pan is used for heating water in which to wash "fillers." The man who was in charge of the pan was washing the fillers, accidentally tilted the pan, the scalding water was thrown on the floor, it spashed up with force, and two men, who were standing near, were struck by the splashes and severely scalded on legs and feet. The pan is provided with a safety-catch to prevent the pan being tilted, but the catch must have been unfastened for some purpose and not again secured.

An inexperienced boy, under 16 years of age, was operating a power-press, cutting out "tops" for jam tins; one of the tops, after being cut out, stuck to the die. The press had been fitted with a guard to prevent the hand coming in contact with the dies on the operating side. The boy, instead of using a "pricker," which is generally used in such cases, put his hand round the back of the die to remove the tin. He must have accidentally struck the machine "on" and the plunger came down, with the result that one of his fingers was crushed. The occupier was prosecuted for employing this boy at this work.

Legal proceedings were instituted against a number of occupiers of factories during the year, and of those in which I prosecuted the following are perhaps of most interest:—

An information was laid against the occupier of a printing factory for failing to affix in his factory a notice of the usual working hours of that factory. Under an award for this industry the hours are fixed at 44½ for the week, any work done beyond which is overtime. The Factories Act provides that any time worked beyond the "ordinary"

hours on any day is to be paid for as overtime, and also limits the number of occasions on which overtime may be worked. Inspection showed that the girls were working irregular hours, and by not working to fixed daily hours an opportunity was given to evade the provisions of the Act, in so far as they related to the restrictions on such working. A conviction was obtained, and a penalty imposed.

In another instance, a similar breach occurred in a large rubber goods factory. In this instance, however, the opportunity was taken advantage of to work the girls the irregular hours without compensating them with proper overtime payment. The result was that when these conditions were detected, the firm was proceeded against in five cases. A conviction was maintained, and a penalty of 20s. and costs in each case was imposed. The firm gave an undertaking in court to adjust all back-money due.

Proceedings were taken against the occupier of a confectionery factory for failing to pay tea-money to female employees who were employed after 6 p.m. The facts were that two boys and four girls had worked overtime on several nights ; the boys were paid the 6d. tea-money, but the girls were not paid. The explanation given by the occupier was that he thought the overtime provisions of the Act only applied to boys. A penalty of 40s. and costs was imposed. The occupier also paid to the girls the amounts due for tea-money.

The occupier of a printing factory was proceeded against on three charges in respect of the overtime provisions of the Act. This occupier had been warned on several occasions of the necessity of observing these provisions, but he apparently disregarded the warnings. Investigations showed that he had worked overtime on a number of occasions and had not kept a record of the working, nor notified it to the Department ; also, the girls were employed for five hours overtime on one day, the limit being three hours. He was fined 40s. and costs in each case.

Two informations were laid against the occupier of a leather goods factory, one for failing to keep his factory in a cleanly state, and the other for not providing wash-basins for his employees. The evidence showed that the factory workrooms and the lavatories were in a very dirty condition, and that the girls were expected to wash in a sink which was used for the purpose of soaking leather and cleaning paste and glue pots, and the wastepipes of which were completely choked. The cases were defended, but the magistrate convicted, and imposed penalties of 60s. and 40s. respectively.

A large firm of biscuit manufacturers was proceeded against for failing to securely fence every part of the mill-gearing, &c. The matter was defended, and it was urged on the part of the defence that the machinery complained of was fenced in compliance with the Act. It was, however, shown by the prosecution that although fences were erected the machinery was not securely fenced, in that the fences were erected in such manner that if knocked against they would fall over or away from the part they were intended to protect. A conviction was obtained, and a penalty of £5 and costs was imposed.

A three-storey building, used for factory purposes, was not provided with means of escape in case of fire for the persons employed in the factory. The owner of the premises was duly notified by the Minister that he would be regarded as the occupier, and he was requested to provide the necessary means of escape to fit the premises for factory purposes. As means of escape were not provided, he was within a reasonable time proceeded against. A conviction was obtained, but an appeal by the defendant against the magistrate's decision was upheld by the Supreme Court, on the grounds of a "bad" information. The court, however, refused to allow costs. As the owner then made no attempt to comply with the Act, further proceedings were instituted, and the procedure intimated by the Supreme Court was followed. The matter was again defended, a conviction was obtained, and a penalty of £5 was imposed. The escape was then erected.

The inspection of a large printing factory disclosed that not only was the factory in a very dirty condition, but also that the mill-gearing was not securely fenced. Previous instructions had been given *re* the fencing of this machinery. The matter was defended, but the magistrate convicted, and inflicted penalties of £5 and £10 respectively.

Action was taken by the Department against a large printing firm for employing females overtime for more than three hours on one day beyond the usual working hours of the factory. The facts disclosed were that this firm had the printing of a weekly newspaper, and the girls were brought into the factory on one Saturday night. They started work at 10 p.m., and worked right through the night (with breaks for refreshment) until 8·15 on Sunday morning. Penalties of 30s. and costs were imposed in each of three cases.

Proceedings were instituted against the occupier of a millinery workroom for not paying female employees the overtime rates prescribed. The explanation given by defendant was that the employees concerned were forewomen, and he did not think it was compulsory to pay those employees overtime rates when overtime was worked ; and further, he thought the high rates of wages paid in these instances were sufficient to cover any payment for overtime. Convictions were obtained, and penalties of 40s. and costs were imposed in each of two cases.

A laundry occupier, on being a second time convicted, was fined £5 and costs for not securely fencing the mill-gearing in his laundry.

Another firm was proceeded against for not observing the overtime provisions of the Act in respect to their forewomen. Informations were laid against a large dressmaking

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and millinery establishment for not paying overtime rates, and for employing females overtime on more than three consecutive days. The facts were that the forewomen came in early and worked late each day in the week and were not paid overtime. Here again the explanation was that it was not considered necessary to pay forewomen overtime. Penalties of 60s. and 40s. respectively were imposed.

A proclamation was issued in June last by which the provisions of the Factories and Shops Act were extended to the whole State from 1st July. In September I visited the south-western portion of the Riverina district for the purpose of general inspection and dealing with "applications to register" for that area. Similarly as in other country districts which I have "opened up," the necessity for the extension was very noticeable—even in those parts which were in close contact with previously proclaimed districts. Fortunately my work was in the majority of instances lighter than has been the case on previous "openings," in that occupiers, although perhaps not previously in a factories district, were to a certain extent acquainted with the more important provisions of the Act, and a lot of "arguing" was thereby avoided. Further, the impression that I received was that employers generally were quite willing to comply with reasonable requirements. Difficulties were met with in the general sanitary conditions of many of the buildings used for factory purposes—for instance, in bake-houses. In many I found that although the periodical visits of the pure food inspectors had tended to keep the internal parts in a fairly cleanly condition, such condition could have been much bettered had the structural conditions been such as would allow of a much higher standard being obtained. In all such cases I required structural alterations. Again, in factories where both sexes were employed, it was found necessary in nearly every instance to require separate closet accommodation for the sexes. Then again, more particularly in the older towns, some of the wooden buildings strongly showed the necessity of general repairs.

The absence of fencing of machinery was very marked; in fact, throughout the whole of the area covered I found that with few exceptions no attempt had been made to safeguard dangerous parts of machinery as required by the Act. There was, however, but little demur when, in my effort to obtain a good standard of efficient safeguarding, I drew attention to all the various parts which in my opinion should be protected to bring the various plants up to the required standard.

Attention has been given to the internal sanitary condition of factories, and many minor but none the less important improvements have been made in the lighting and ventilation of workrooms, necessary repairs to floorings, and remedial requirements, as in the instance of damp walls, &c. The requirements as to closet accommodation have also received the necessary consideration, and the accommodation in the older buildings is gradually being brought up to the standard required by the regulations.

Mr. Superintending Inspector W. Armitage reports:—

At the beginning of 1915 some industries were being carried on at their full strength. On account of the docking and fitting out of transports and the work incidental thereto, the shipbuilding trade was particularly busy. The construction of several large steel barges for the Commonwealth was also undertaken at Woolwich dock, in addition to the unusual docking of the large mailboats. At the end of the year also in every large engineering shop the familiar 3 inch steel bars were being cut and turned for shell cases.

A result of the war was that the building trade received a decided set-back owing to the number of vacant houses, the high price and the scarcity of material, some of the minor fittings being unobtainable. This has had a serious effect on factories interested, particularly the saw-mills and brickyards.

The order-tailoring branch of the clothing trade in the middle of 1915 could be expressed in one word—dead; some of the shops in the month of June being empty. Towards the holiday season a slight improvement took place, and in a few instances overtime was worked. A number of the slop clothing factories are engaged on khaki work for the military.

Fire-escapes.—In the middle of the year, on changing from the suburbs to the city, I found the question of fire-escapes a very serious matter. Some places that were sufficiently equipped six or seven years ago, when only a few hands were employed, have now increased considerably and their requirements have altered, necessitating in some instances the erection of entirely new escapes. The owners of some of the buildings without demur erected the escape on verbal notice.

Guarding of Machinery.—There is still the tendency to erect guards out of packing-cases, or even strawboard. In most cases these are a snare, being actually more dangerous than if no guard were there at all. Success in business means to many merely the making of money, and with this end in view economy in every direction counts for much. I continually point out to occupiers that, unless they strictly comply with section 33, which has the words "securely fenced" in referring to mill-gearing, their insurance policy does not cover them if they fail to comply with this section. In a large ice-works a 5-ton fly-wheel was unfenced. The occupier, when prosecuted, contended that the bed of the engine, which was only 18 inches high, formed a fence. In another instance of prosecution, a lad started to work in a factory for the first time at 8 a.m., and at 11 o'clock

o'clock he had the tops of his fingers taken off. The occupier made the excuse to the Bench that the guard was being repaired. The boy, in his evidence, stated that he had never seen any guard near the machine while he worked it.

Country Factories.—The extension of the Factories Act to the country at the latter end of the year has been of great benefit to the State. The sanitary condition of the stores, bakehouses, and factories outside the municipal and urban areas required considerable attention. I can only say that their condition was primitive and often Asiatic. And yet the improvements required were to be had for the asking. Only in one case out of the many country towns and villages visited was opposition met with—from a baker, who appealed to the Minister. Before his reply was received, however, he completed the work, his competitor in the same town carried out similar alterations at once. From Cooma to Sydney every bakehouse has been brought up to the standard, viz., concrete floors, limewashed walls, clean and wholesome conditions—the standard of the city houses. In some of the villages, in which vile sanitary conditions were found, people seemed to be expecting the changes on account of late epidemics of diphtheria in some places and scarlet fever in others. I must also state that with country occupiers of stores, shops, and factories, the advent of the Factories Act to their districts was taken as an anticipated matter. No questions were asked, and less opposition and argument met than with the average metropolitan occupier of to-day. The guarding of machinery is also a very necessary part of this extension, as in most cases the placing of the shafting near the floor made conditions very dangerous. The attitude of country occupiers during 1915 formed a pleasing contrast to the year 1897 in the metropolitan area, and the advent of the Factories Act to Sydney and suburbs, where for years people argued as to the necessity for it.

Mr. Senior Inspector Burkitt reports:—

The provisions of the Act were extended to the whole of the State from 1st July, and in the latter part of September, and beginning of October, I visited a number of the larger towns on the northern and north-western railway lines, for the purpose of receiving applications to register factories, and explaining the requirements of the Act. But though the proclamation was dated 30th June, I found that comparatively little notice had been taken of it, the occupiers of factories in some cases stating that they had heard nothing of it, in others that they had been waiting for an inspector's visit, which they had expected sooner, and others again had misread the definition of a factory, and thought that it was in no case necessary to register unless four persons were employed.

Business in most of the places visited was bad, and I was frequently informed that in consequence of this the number of employees was considerably below the ordinary; but the opinion was expressed by many that the abundant harvest which was hoped for (which hope has to a great extent been since realised) would bring matters, at any rate, nearer to normal conditions, which, however, could not be fully expected until the cessation of the war.

During the twenty-two working days of my trip I visited fourteen towns, and inspected 218 factories; but owing to pressure of time a number of those situated at intermediate railway townships, at places at a distance from the railway (excepting Bingara, which I was able to include in my itinerary), and those situated on the branch lines, Moree to Mungindi, and Narrabri to Walgett and Collarenebri, were not visited. It is probable that a very large proportion of the occupiers of factories at these places have not even made application for registration, and exceedingly improbable that they have fulfilled other requirements of the Act. At a number of the towns visited electric power was available, and in use at many of the smaller factories, though the larger ones for the most part used steam or suction gas. Nearly all of the machinery was unguarded, and in many places so extremely dangerous that one wonders how serious accidents could have been avoided, and it is more than likely that very many preventable ones of a minor character, at least, have occurred in the past. In many of the older sawmills, for instance, which had been constructed without any regard to the safety of employees, shafts were found from 6 feet to 10 feet from the ground, the "head-way" under some pulleys being as low as 4 feet 6 inches, from which very long belts were driven without any protection whatever—belts, moreover, which should have been scrapped long ago. No reports of accidents have come to hand from this portion of the State since the application of the Act. Sanitary matters were, generally speaking, in a very fair condition, and where both sexes were employed proper separate accommodation provided. In some places, however, bakehouses were found to be below the standard required, and in many cases I ordered impervious floors to be provided in place of those constructed of local pine, which is about the most unsuitable material for this purpose, knot holes and shrinkage allowing the flour, &c., to accumulate underneath. In some instances also I found it necessary to order roofs to be lined on the inside, or coated with refrigerating paint on the outside, to reduce the temperature, which was unpleasantly high, even in October at Moree.

I regret to report two fatal accidents during the year. The first occurred in a tannery in a portion of the metropolitan area, in which I was temporarily acting. A young man went to oil the end of a large revolving drum, which was rubbing against a pair of cog-wheels, and to do this, instead of using an oil-can, he saturated a handful of cotton-waste with oil and squeezed it against the drum; the waste became entangled with the cogs and drew his hand between them, necessitating the amputation of the larger,

larger portion of it. When I interviewed him at the hospital he explained the circumstances to me, and congratulated himself on not receiving a more serious injury, expressing the hope that he would be able to go home in a few days. Blood poisoning supervened, however, from which he died. The other fatality, which was caused by the explosion of a vulcanising apparatus at a rubber factory, was even more serious. A number of girls were working in the room, when a large cylinder, in which rubber shoes had been placed after having been treated with a solution containing benzine, exploded, causing fatal injuries to one of the girls, severe burns to two of the others, a fourth was thrown violently on to a frame-work, on which were protuding pegs, which entered her thigh, and two others received severe shocks to the system, while a man working on the floor below was indirectly injured by the same occurrence by falling against a table in his alarm at the noise of the explosion. An exhaustive inquiry was held by the City Coroner, and though evidence was tendered by some of the leading experts of Sydney, no conclusion could be arrived at as to the cause of the explosion. Two other serious accidents occurred in my district, in each case resulting in the amputation of a boy's hand, one having been crushed in cog-wheels, and the other lacerated by the knives of a tenoning machine. I furnished reports to the Department in the ordinary way on these cases, but, as I understand, they are *sub judice*, I refrain from further comment at present. For failing to report an accident, by which a female employee lost the top of her finger at a laundry calender, the employer was prosecuted and fined £5. Proceedings were also taken against occupiers of factories for other breaches of the Act, viz., in one case for failing to guard mill-gearing, when a penalty of £3 was imposed, and in three instances for employing boys under 16 years of age without certificates, in each of which the fines were £1.

The designers and builders of fire-escape staircases, in some cases at all events, still appear to be indifferent to the requirements of the Act, two of these structures having been erected recently in my district, the plans of which had not previously been submitted for the approval of the chief officer of fire brigades, and on completion were found to be not in accordance with the standard required by that officer.

Mr. Senior Inspector J. Hastie reports :—

The year just closed has maintained industrial activity far in excess of that predicted by the numerous pessimists on account of the war.

The industries most adversely affected are the building and allied trades, many of the brickyards having closed down, and others are working half of the plant.

Whilst it is a pleasure to me to be able to report satisfactorily upon the result of my labours, it is extremely difficult to deviate to any great extent from previous reports. Conditions are changing somewhat from year to year, and these changes are generally in the nature of improvements, which consequently present new problems; but a year is a short span in which such pronounced changes would be brought about as to make a report entirely new.

In regard to the safeguarding of machinery, my work in that direction has been to some extent facilitated by a realisation on the part of the factory-owners that my duties as an inspector are more helpful than otherwise. It is indeed not unusual for me to be requested to look over the machinery in a factory, and to suggest any improvements that may appear desirable in the way of arranging or guarding machinery, for, as they say, "We want to be right, and we want to know that we are right." The inspector has the advantage of seeing any improved methods, and thereby has the opportunity of gaining such experience as to become an expert at that particular class of work, and many of the factory-owners are desirous of availing themselves of his knowledge.

With regard to the fencing of machinery, my experience has been that in my endeavours to protect workmen I have found one of my greatest obstacles to be the man I was trying to protect. It is not unusual, after compelling the manufacturer to provide a guard or safety-device for his machine, to find on my next visit that the guard has been removed by the operator, without any reasonable excuse for doing so.

It is a fairly easy matter for a person having a slight knowledge of machinery to give an order for a guard of a certain design to be affixed to a machine; but the objective desired is not obtained if the affixing of that guard materially depreciates the efficiency of the machine, or perhaps accelerates the risk of accident to the operator. I have seen books of drawings and photographs of safety-devices for machines, from the United States and other parts of the world. When I joined this Department, eight years ago, I saw books in this office portraying almost similar safety-devices; but they were, however, only pictures, the practicability of the majority of them being a negative quantity. Since my appointment as a factory inspector, I have only seen one new and original safety-device for a machine, and that was designed by this Department. Up to about five years ago it was almost a weekly occurrence to have an accident at the class of machine this guard was designed for, since then there has, to my knowledge, only been one accident on machines on which this guard was fixed. I should perhaps somewhat qualify that statement, because since taking over my new district in January, 1916, I have seen a new and original and very efficient automatic guard for a wood-turning machine, designed and put into operation at the end of December by Inspector Lynch, which reflects great credit on his mechanical ingenuity. The most sanguine inspector does not expect to entirely eliminate accidents in factories. It does not matter

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how diligently one may work and endeavour to acquire knowledge of how to safeguard machinery, there is always much to learn; and although the elimination of accidents is an impossibility, the risk of accident is minimised to a very great extent by the work of inspectors.

Child Labour.—"Child," as defined by the Factory Act, means any person under the age of fourteen years. I have found only one "child" in my district; and when asked why this child was working in the factory, the employer said that "he was not working there, he was an office-boy, and had no right to be in the factory," this, despite the fact that he was working in the factory whilst we held this conversation. It is not an uncommon occurrence to receive a complaint of children working in factories; but upon investigation, I have found that in most cases the complaints have come from persons who have had no chance of ascertaining the age of the children complained of other than their appearance while going in or out of the factory, and in all probability taking the size of the person as an indication of the age.

Accidents.—There has not been any fatal accident in my district during the year. During the absence of the inspector for the district, I investigated the cause of an accident to a woman, by which she had her hand severely crushed and burned at a steam calender in a laundry. The machine was fitted with an efficient guard, which had been removed to facilitate the packing of the rollers, and was not replaced before starting the machine. The woman was working on the off-take side of the machine, and one of the articles adhered to the roller, and in trying to take it off, her hand was caught between the rollers. Had the guard been in position it would have entirely prevented her hand from getting near the intersection of the rollers. Proceedings were taken against the occupier under section 34 of the Act, and he was fined.

I was deputed, in company with Inspector Burkitt, to investigate the cause of the bursting of a vulcaniser at a rubber works, by which a young woman was killed and six other persons injured.

The vulcaniser was 21 feet long, 8 feet in diameter, three-eighths inch (3-8ths) steel plates, single rivetted. The ends were dished, having a radius of 9 feet, one end was rivetted to the shell, the other end was bolted to facilitate its removal; the plates forming the door were in two, having a single rivetted lap-joint down the centre.

At the inquiry held at the Coroner's Court, which I attended, the main facts disclosed were as follow:—The chief engineer for the firm stated that the safety-valve previous to the explosion was in working order, but that it had not been overhauled since the vulcaniser had been erected two years ago, and that after the explosion an iron bar was used to knock the valve out of the seat. He also said that to hear the safety-valve blowing off, he had to put his ear close to it. The air is pumped into a receiver, which is loaded to carry a pressure of 49 lb. to the square inch, from there the air is taken to the vulcaniser, which is loaded to carry a pressure of 25 lb. per square inch. There is no reducing-valve between the receiver and the vulcaniser, nor could he calculate the strength or construction of boilers or vulcanisers.

The foreman of that part of the works gave almost similar evidence.

W. H. Warren, M.I.C.E., LLD., Wh. Sc., professor of engineering at the Sydney University, stated that he made an inspection of the vulcaniser in question, and the door was very much distorted, and gave evidence of a violent explosion, the shell of the vulcaniser was also slightly distorted, the safety-valve was jambed, which could be accounted for by the slightly distorted shell to which the safety-valve chest was attached. He had calculated the strength of the structure, and it would be safe to work at 30 lb. per square inch. The weakest part of the structure was the door. If the door had been stronger than the shell, then some other part of the structure, probably the longitudinal seams, would have gone. The pressure on the vulcaniser was normal, and the accident was not due to any bad construction of the structure. The only way he could see to prevent a similar occurrence would be to use a neutral gas to prevent the possibility of an explosive mixture being present.

N. H. Case, analyst and inspector in the Explosive Department, stated that in his opinion the explosion was the result of an inflammable mixture of benzine, vapour, and air. If the explosion had been due to excess of air-pressure, the result would have been rapid cooling, due to the expansion of the contents of the vulcaniser. He had two theories as to the cause of the explosion—one was that a spark was caused by some metallic body falling, the other was that the gas was ignited by the spontaneous combustion of some foreign matter, such as a piece of oiled rag or waste. In his opinion the cause of the explosion was an absolute mystery, which could only be theorised upon.

Dr. G. Harker, professor of organic and applied chemistry at the Sydney University, stated that the ingredients of the contents of the cylinder, as told to him, could have been capable of generating an explosive vapour. As far as he could see, there was no possibility of a light from the outside entering the vulcaniser. He could not say definitely what caused the explosion. It might have been caused by the spontaneous combustion of an oiled rag inside the cylinder, but such may not have been the cause of the ignition.

In giving my evidence I said: I was of the opinion that the cause of the explosion was the ignition of the explosive vapour within the cylinder. According to my calculation, using a factor of safety of five, the cylinder had a safe working pressure of 27 lb. per square inch. The door was the weakest part of the structure. A dish door with a dish having a radius equal to the diameter of the cylinder is as strong as the cylinder up

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to a diameter of 4 feet, above that it should be stayed similar to flat surfaces. A reducing valve should have been attached to the system between the air-receiver and the vulcaniser. If the door had been made stronger than the shell it would not, in my opinion, have prevented the bursting of the structure, in all probability it would have failed on the longitudinal seams of the shell. The safety-valve was seized in its seat previous to the explosion. If the valve had been free it would not have prevented the explosion, the volume would have been too great and sudden for the safety-valve to have had any effect. The girls working in the shoeroom would be as safe there as other parts of the works where females are employed. When a boiler bursts it may travel in any direction.

The Coroner's finding was accidental death, remarking as he has on other somewhat similar occasions, that he was amazed that there seemed to be no Government control over structures of this nature.

I was deputed to inquire into the danger in connection with a carbonating machine, which is very much used in hotels. This is a small machine used for ærating purposes, having $C.O._2$ cylinder attachment.

In my opinion the danger from these machines is in the difference of pressure of $C.O._2$ in the cylinder, and that required for ærating purposes. The pressure of gas in the cylinders varies according to temperature, from 1,000 lb. to 1,800 lb. per square inch. The pressure worked at in the ærating machines is 100 lb. per square inch, the initial pressure of the $C.O._2$ is reduced before entering the machine by a diaphragm reducing valve. If a case should arise where the reducing valve was out of order—a common occurrence—and the safety-valve fast to its seat, as in one instance I found to be the case, the whole pressure of the $C.O._2$ from the cylinder (1,800) would be passed on to the machine, which is designed to carry only 100 lb.

I suppose between $C.O._2$ ammonia, and oxygen cylinders in circulation for use in the different industries of the State, there are approximately 50,000 handled principally by people having a very hazy idea of the danger stored within.

Previous to July, 1915, there was only a part of the State under the jurisdiction of the Factories and Shops Act. On that date the whole of the State was proclaimed under the Act. In September, I was deputed to inspect the factories in the north of the State, from Murwillumbah on the Tweed River to Taree on the Manning River, including the Richmond, Clarence, Bellinger, Nambucca and Hastings rivers. As this was the first visit of an inspector under the Factory Act, I was not in the least disappointed in my anticipation as to the state of the factories. The principal industry in the north so far affected by this legislation is sawmilling. The mills are all well found, having up-to-date machinery, the majority having the main drives in the basement. The protection of machinery was almost without exception a negative quantity. Sawmills, unlike many other factories, give little trouble so far as ventilation and sanitation are concerned, being practically carried on in the open air. The mills on the Northern Rivers are generally situated as near to the banks of the river as practicable, or at a siding from the main rail road. The minimum rate of pay in all the mills I visited was that prescribed by the award, some of the sawyers receiving £1 per day. The only complaint made to me was that the excessive dry weather, which, if rain did not come shortly, would perhaps cause many of the mills to shut down, not for lack of work, but for scarcity of feed for the bullocks.

Thanks to the inspection under the Pure Foods Act, the bakehouses and ærated water factories were all, with one exception, in good condition.

Mr. Inspector A. G. P. Jackson reports:—

During the first six months of the year the districts of Alexandria, Redfern, Waterloo, and Botany were included in the district under my supervision, but for the last six months Alexandria and Erskineville, together with Woolloomooloo, Darlinghurst, and part of Rushcutters Bay only have been under my care. In the district of Alexandria some very fine new factories have been erected. One industry new to this State viz., the manufacture of safety matches, has lately been started with every prospect of success, as the management have more orders than they can fulfil. New and up-to-date machinery is installed and many women employed. Adjoining this is a large factory, recently built, for the manufacture of paper bags of a superior quality. New and modern machinery is also used here, of a class which I have not seen in any other paper bag factory. Both of these structures are large and well ventilated, but being constructed of iron were rather hot in summer. I ordered the painting of the roofs with two coats of refrigerating paint, with the result that the temperature was appreciably lowered.

The instructions given for the safe-guarding of machinery have borne fruit in the very small number of accidents occurring in this district; and of the accidents reported, few were under section 38, and consequently need not have been recorded. This in itself should be evidence that the work of the inspector has not been in vain. I often find it necessary to emphasise the fact to employers that our duty as inspectors is to make accidents in factories impossible as far as that is practicable. No fatal accidents have occurred in factories within my district this year.

As mentioned in my last report some employers are still lax in complying with section 45 of the Act, which provides that certificates of fitness must be obtained for persons under sixteen years of age in certain classes of factories, and I have recommended prosecutions in several cases for this breach of the Act.

In

In one case I found it necessary to recommend the prosecution of the foreman in a joinery factory. This man was very emphatic in informing me that he was the person in charge of the factory, and when I found that a breach had been committed by failing to maintain the guard at a four-sided planer, I recommended a prosecution and the foreman was fined for this breach.

In many cases the employer provides the necessary guards, but the foreman or other employee neglects to use them, and I think where possible the result of this carelessness should be borne by those neglecting to use the guards provided.

One result of the war has been the closing down of several good factories occupied by Chinese in the manufacture of furniture. Bevelled glass used largely in this industry has been scarce, as much of it was supplied by France and Belgium. During the early part of the war the leather and fellmongery trades suffered considerably, but the trade in these lines has now become much better and some firms are very busy. The straw hat trade has been hit very hard, and also the boot trade in some lines, owing to so many men having enlisted.

During the last half-year, my district being smaller, I was enabled to visit every factory in my district at least twice, and some three or four times where necessary.

On the whole I found the provisions of the Act better observed and found less cause for complaint than in the preceding year.

Mr. Inspector J. Wallace reports :—

During the half-year ending December, 1915, I was engaged on factory inspecting work in the No. 1 District, in connection with which I have endeavoured to give every attention to the necessary requirements of Part II of the Act. There was a fair number of new registrations and cancellations of factories in the area visited. A small number of factories went out of business owing to the war, whilst others moved into larger and more suitable premises. This was particularly noticeable in respect to printing and bookbinding establishments.

Sanitation and Ventilation.—There is a general improvement taking place in regard to the sanitation and ventilation of a great number of factories. In quite a number of factories visited, I observed that where the sanitation was neglected the other conditions were fairly good. I had occasion to severely comment about the unsatisfactory state of the sanitary conveniences in several factories. In some instances the employers complained that the neglect was owing to the carelessness of the person responsible for the cleaning, also complained of the want of co-operation as regards cleanliness by the employees. In my opinion there is a great need to pay particular attention to sanitary arrangements provided, especially in connection with the prevention of disease.

Guarding of Machinery.—I have taken particular interest in the safe guarding of machinery. In a great number of factories visited the machinery was excellently guarded; in fact, I have had occasion to advise occupiers to visit certain factories for the purpose of seeing how machinery should be guarded. There is a great tendency on the part of some occupiers to erect most unsuitable and cumbersome guards; in some cases the greater part of machinery is hidden by unnecessary wooden structures. As mentioned in my previous report, a great improvement in the existing method of guarding machinery would be effected if a more uniform system was provided for and enforced under the Act.

Accidents.—The most serious accident occurred to a foreman whilst engaged trimming up the uneven surface of a large grinder. He used a piece of ¾-inch pipe, worked off the top of rest at the rear of stone, being held by two hands, when the pipe was drawn in between the rest and stone, causing the pipe to be thrown up from an almost horizontal to a vertical position, drawing the operator's right hand between the pipe and stone, with the result that four fingers were crushed, necessitating the amputation of three fingers and several stitches in the other, which is almost useless. The machine was well guarded. On my interviewing the foreman, he stated that he had been engaged in several well-known English and American factories, but had not met with an accident before, although engaged amongst all classes of machinery. In this instance the accident was caused through his own fault in not using the proper steel bar provided for the purpose. He was engaged by this particular firm as an expert. He also installed all the machinery in the factory, which was well guarded. In many instances, where only the employers are engaged in the factory, there is an idea prevailing that, because there are no employees engaged, they should not be compelled to guard machinery. I have pointed out that the Act provides for the general welfare of persons engaged.

Fire Escapes.—In this connection I have received every assistance from the Fire Brigades officer in charge of the district over which I had jurisdiction. In connection with the registration of a factory situated in one of the large city buildings, the occupier was ordered to provide proper means of escape by putting in a new approach to the existing fire escape. The owner complied with the Minister's direction by not only providing one new steel bridge approach, but he also put in new approaches from five other floors to the fire escape, which had a beneficial result for all the remaining tenants in the building. I have not received any complaints from employees in the area visited; generally the Act provisions are fairly well observed.

In a great number of factories visited the employers have informed me that the most skilled tradesmen employed have enlisted for the war, there being great difficulty in getting suitable hands to fill their places.

Mr.

Mr. Inspector F. A. Dunleavy reports :—

During the year I made a large number of inspections of the various factories under my supervision, besides doing some work for another Inspector who, through illness, was unable to give his district the attention required.

Section 33.—During my peregrinations I noticed that section 33 of the Factories and Shops Act was to a large extent disregarded. I served a number of written notices on various occupiers to securely fence all dangerous machinery, at the same time pointing out to them the machinery I considered should be efficiently fenced. In a great number of instances the instructions were carried into effect. In other cases the instructions given were totally disregarded, and on my successive visits I had again to call the attention of the occupiers (whom I had served with notices) to the unsatisfactory state of the inefficiently guarded machinery and in many instances I instituted prosecutions, which were carried to conviction.

Occupiers of long established factories who had done a small amount of guarding in comparison to what any ordinary intelligent person would insist on being done in the interest of the employees, were loud in their complaints because I insisted on the machinery being efficiently guarded.

In a couple of instances in which I took aetion I asked the Stipendary Magistrate, who heard the respective cases, to visit the factories concerned. In two cases the magistrates did visit the factory, and in one instance, in summing up, the magistrate remarked from the Bench, that, after viewing the machinery (apart from my evidence on the subject) he had come to the conclusion that the machinery was inadequately guarded, and that the employees were liable to be maimed, or even killed, at any moment, and he (the magistrate) eonsidered it was the duty of occupiers to fence all dangerous machinery without waiting for instructions from the Inspector.

Another magistrate told a number of defendants who happened to plead guilty, that the Factories Act had been in operation long enough for them to know that they should guard all dangerous machinery, and it appeared to him that they should guard all dangerous machinery without attempting to brazen through until an Inspector insisted on the machinery being guarded, irrespective of the safety of their employees.

The Departmental interpretation of section 33 of the Factories Act during the year, based on well-known English cases on a similar section under the English Act, has been the means of administering the Factory Act so as to efficiently safeguard the interests of the employees who hitherto had not received the full benefit of the protection provided for them under section 33 of the Act.

I had occasion during the year to take aetion against twenty-three oecupiers for breaches of section 33 of the Act, and in each case a conviction was secured.

Section 45.—Section 45 of the Act provides that persons under 16 years of age shall not be employed, unless the occupier has obtained a certificate of fitness in the prescribed form of the fitness of such person, in certain classes of factories. Under this section I have had to institute a number of prosecutions against certain occupiers. Although the great majority of occupiers are very particular not to allow persons under 16 years of age to be employed without a certificate of fitness, there are still some occupiers who are indifferent even to that humane safeguard, which is in the interest of many physically unfit persons who may be forced to factory work, if such provision was not in existence. I instituted proceedings in nineteen cases for breaches of this section, and they were all carried to conviction.

Regulation 19.—Regulation 19, clause 7, provides that where machinery is moved by mechanical power, no female shall be employed, &c., whilst her hair is not covered, or closely fastened to her head. Under this regulation I have had to institute proceedings to insure its enforeement.

In a number of faetories I visited I have observed the girls, as soon as my presenee became known to them, making a hasty attempt to adjust their hair. I have spoken to numbers of them, and pointed out that the regulation should be conformed with. They all agreed it should be done. During a visit to one partieular factory, I saw a number of girls working machinery, worked by mechanical power, with their hair hanging down. I interviewed the occupier (a woman), and pointed out the danger of girls working with their hair hanging down at the machines concerned. She informed me that on the day previous to my visit, a girl got some of the strands of her hair caught in the machinery, and luckily the motor man saw it, and stopped the machinery before any injury was done to the girl. She also informed me that she did not care to insist upon the enforcement of Regulation 19, clause 7, because she was afraid the girls would leave if she did so.

I found in every instance, where I pointed out the danger to the girls, they realised it, and immediately conformed with the regulation. It appeared to me to be indifference of the occupiers, rather than the fear of the girls leaving, that the regulation was not strictly observed. Five cases under this section were carried to conviction.

Section 40.—Under section 40 I had to institute proceedings against one occupier for a breach of that portion of the Act. He had employed a boy under 14 years of age without special permission of the Minister. The occupier told the magistrate that he did not know that it was necessary to get special permission, notwithstanding the fact that he had certificates for some persons under 16 years of age on the day of my visit to the factory.

Section 41.—During the year I also instituted proceedings against an occupier for breach of section 41 of the Act for employing a boy under 16 years of age on a power press. Owing to my being unable to prove that the particular occupier had been

served

served with a copy of the Minister's order, the case was dismissed. I would suggest that a more perfect system be instituted in the Department, so that service of the Minister's order could be easily proved, or that the Act be amended to make it obligatory on the part of the occupiers to exhibit the order, and delete all words from "who" to "Act" inclusive.

Section 34.—Under Section 34 I instituted proceedings in four instances. One case was vigorously defended. I had given an occupier notice to securely fence an emery wheel. I visited the factory about six or eight weeks afterwards, and I noticed that he had failed to carry out my instructions—in fact, he had totally ignored those and other instructions I had given him under section 33. His defence was that he had not been served with a notice in the prescribed form under section 34 of the Act. The magistrate overruled the objection, and he was fined £3.

Section 39.—In the city area I came across a number of cases where occupiers had been in occupation for a number of years, and inadequate provision had been made for fire escapes. In a number of instances I gave notice to provide fire escapes in conformity with section 39 of the Act.

In one case in particular, I asked an occupier to show me his fire escape. He showed me a sliding-door, which was closed, and said, "That is the means of escape." The door had a chock up against it to prevent its being opened easily from the other side. I asked him to remove the chock, and open the door for me. He did so, and when the sliding-door was opened, I discovered that the opening on the other side had been bricked up, and the occupier assured me that he did not know it was bricked up, nor did he know how long it had been in that condition. He said he was living in a fool's paradise. If a fire occurred, some of the employees would probably have met with their death. Action was taken against him, and he was convicted. The defect has since been remedied.

In another instance an occupier applied for registration of a factory. On visiting the place I ascertained that he intended to occupy three floors. There were two other floors above his factory unoccupied. I asked him to show me the means of fire escape. He showed me the only stairway in the building, and said if a fire occurred underneath, the employees would ascend the two floors above him, and get on the roof of the adjoining factory, and descend by the stairway in that building.

The Factories and Shops Act provides in section 39, clause 3, that every factory in which persons are employed above the first floor should, in addition to the usual fire escapes, distinct from the stairs in ordinary use, be provided on each floor above the first floor with means by which persons prevented by flames or smoke from descending by the ordinary way, may be enabled to descend in safety from windows or other openings or by external stairs, ladders, or by such other means as may be deemed sufficient, all such means to be approved in writing by the Chief Officer of Fire Brigades, or any officer of fire brigades appointed by him in that behalf. In this instance the Fire Brigades officer decided that the means of ascent by the stairs in ordinary use to the roof, and descending by the ordinary stairs in the adjoining factory were sufficient, notwithstanding that the clause provides that in addition to the usual fire escapes, and distinct from the stairs in ordinary use, means shall be provided by which persons may be able to descend (not ascend, to descend) in safety, &c. If that interpretation of the clause is correct, I would suggest that the whole of the clause should be re-drafted, stripped of all its verbiage, and made clear and distinct, and brought into conformity with provisions for fire escapes in existence in other parts of the world. From what I have seen of some of the fire escapes in the city area, it leads me to the conclusion that it is necessary, in the interests of common sense and justice, that steps should be taken to provide effective fire escapes in all buildings, so that the lives of the employees will be safeguarded, irrespective of the cost.

In connection with cleanliness and ventilation, I have noticed that a large number of occupiers are anxious to keep their factories in a cleanly condition, and also to have them well ventilated. On the other hand, there are still some occupiers who think that factories should only be cleaned or swept once or, at the most, twice a week.

During the year I instituted proceedings under the Factories and Shops Act against sixty-one occupiers, and fifty-nine cases were carried to conviction, and defendants were mulct in fines and costs to the extent of £119 8s. Two cases were dismissed owing to technical difficulties.

MR. INSPECTOR J. DURACK reports:—

It is with much regret that I have to state that I was able to visit but very few of the factories in my district during the year 1915, in consequence of a severe and prolonged illness overtaking me during the latter part of that year. Under such circumstances, therefore, I feel that any report which I might make respecting the operation of the Factories and Shops Act for this year would not be of sufficient importance to merit recognition by publication in the Annual Report, if such report was based only upon material collected by my own individual efforts and as a result of personal observation and experience gained in inspectorial work, and having also in mind the comparatively few factories visited by me during that short period.

MR. INSPECTOR H. THYER reports:—

The provisions of Part II of the Factories and Shops Act, 1912, were by proclamation of His Excellency the Governor, on 22nd June, 1915, extended to the whole of the State of New South Wales. The proclamation was effective as from the 1st July, 1915. The immediate outcome of the proclamation was an increase in the number of factories registered. The

The number of factories registered at 31st December, 1915, was 7,521, as compared with 6,069 at 31st December, 1914, an increase of 1,452. Of the 7,521 factories registered, some 1,200 are within the area which was not under the jurisdiction of the Act prior to the proclamation of 22nd June.

Following upon the operation of the proclamation, I was instructed, in September, to visit the Cootamundra District, primarily for the purpose of dealing with applications for registration of factories under the Factories and Shops Act, 1912. The Cootamundra District includes the Albury-Wagga Division, which for some years had been a factory district, and I was able to contrast the conditions prevailing in this district with those existing in the newly-proclaimed area.

In the Albury-Wagga District a higher standard of hygiene and general sanitation was maintained in factories, machinery was fenced, and the general provisions of the Act for the safety, protection and welfare of the employees were observed ; while in the area not previously under the jurisdiction of the Act, in very few factories was there any protection for the safety of employees from dangerous machinery, shafting or belting.

In all, some 240 factories were subjected to my inspection, and in the majority of these it was necessary for instructions to be given either in respect of the fencing of machinery or for the cleaning of the factory.

In one instance a temporary permit to occupy premises as a factory was recommended. The premises were used as a bakehouse, the ceiling of which was less than 8 feet from the floor. Instructions were given to raise the ceiling 1 ft. 6 in., so as to conform with Regulation 3 of the Act.

In several instances I found defective floors in bakehouses, and in each case instructions to provide impervious floors were given, and have since been carried out.

In two factories where men and women were employed, separate w.c. accommodation was not provided. Upon this being brought under the notice of the owner, steps were at once taken to comply with the Act.

The neglect to guard or fence dangerous machinery, fly wheels, mill-gearing, &c., was most marked in factories situate within the area added by the proclamation of 22nd June, 1915. In two large engineering shops no guards were erected upon the machines in use. Lathes, drills, &c., and the fly wheels and main driving belts were unfenced. In wood-working establishments the same condition prevailed. Circular saws, planing and shaping machines, and band saws were worked without guards. In two cases guards had been supplied with the machines, but were not availed of by the workmen. In every case the employer was instructed to conform with section 33 of the Act, and information was given as to the various guards procurable.

At a large flour mill in course of erection, and nearing completion, no provision had been made for escape in case of fire, although the building was five storeys high. I directed the attention of the owner to the section and regulation of the Act in respect of fire escapes, and informed him that before registration could be granted the terms of the section and regulation would have to be complied with.

In a number of registered factories, in which no machinery was used, and where the number of employees had fallen below the statutory minimum number (4), employers expressed their desire that the registration should not be cancelled, and indicated their intention of adhering to statutory requirements in conformity with the provisions of the Act. Generally, I found employers anxious for information concerning their responsibilities under the Act, and they exhibited readiness and willingness to carry out instructions issued, and to comply with the requirements of the Act.

Except for the tour of inspection herein detailed, I was for the remainder of the year 1914 retained upon work of a special nature in the Ministerial office.

MR. INSPECTOR W. D. CLARK reports :—

The work of factory inspection during 1915 has been continued with uniform regularity. The change of districts during the year brought me into a new area of operations, and prevents a comparison with the previous year's work. The conditions with respect to cleanliness and sanitation are generally fairly good, but in some instances it has been necessary to draw occupiers' attention to negligence in this respect.

Child Labour.—The provisions of the Act have been well observed, one instance only coming within my notice wherein boys or girls were employed without certificates of physical fitness ; in this case the action was inexcusable, as the occupier had previously been warned as to the necessity for obtaining such certificates.

Machinery Safeguards.—This important phase of the work has received special attention. In many instances every precaution is taken to safeguard moving machinery, and inspectorial assistance is often solicited to make proper provision to minimise as far as possible the risk of accident. On the other hand, some employers show considerable negligence and inattention to the provisions of the Act in this respect, and fail to provide, even after being ordered, safety appliances to their machinery. In these cases legal action was taken to compel attention to the matter.

Accidents.—These have not been numerous in my district, and were chiefly confined to cases outside the provisions of the Act. In one case to the contrary, however, the operator of a spindle-headed moulding machine lost three fingers of one hand, but the investigation did not disclose that other than reasonable precaution had been taken to minimise the risk of accident, notwithstanding the fact that negligence had been alleged. In another case the operator lost a part of his thumb in a surface planer, which had not been guarded, although a guard was provided for the machine.

Country

Country Work.—During the past year I visited the far Western Division of the State, consequent on the issue of the proclamation extending the operations of the Act to the whole of the State. Factory conditions were uniformly low in many of the Western towns. In no case had any attention been paid to the guarding of the machinery, even in cases where fast running machinery was in use. Structurally, many of the factories were antiquated and not up to the standard of modern factory requirements, but in the course of time these will disappear, to be replaced with others of standard requirements. Alterations to be made will alleviate, in the meantime, some of the disabilities under which they operate. Occupiers generally showed a ready disposition to make every provision considered necessary to protect the lives and limbs of the employees, and in many instances expressed their approval of the innovation in question.

General.—Industrial arbitration work has also been done in conjunction with the work of factory inspection, both in the city and when in the country.

Mr. Inspector J. Nolan reports :—

During the period from January to June inclusive, I attended to a portion of Mr. Inspector Jackson's district, viz., Paddington, Waverley, and Woollahra, and from July to December, in conformity with the rearrangement of the Metropolitan area, I attended to a portion of the City area, also Newtown and Enmore. During the year I had the opportunity of visiting nearly all the factories in the districts above mentioned, and generally speaking, found that the provisions of the Factories and Shops Act and Regulations were being reasonably observed.

I have had no difficulty with respect to registrations of factories, and in no case did I find any person in occupation of an unregistered factory. I also found that the sections of the Act dealing with exhibition of the Act, Notices, Abstracts, and Time Sheets received attention. Regarding Certificates of Fitness which must be secured by young persons working under certain conditions, I have had occasion to recommend that action be taken in several cases. In one factory (an iron foundry) I discovered a lad under 14 years without a certificate. The foreman in charge did not seem to be much concerned when the matter was brought under his notice, and from his remarks, it appeared that no steps were likely to be taken to secure the necessary certificate. Action was taken in this matter and a fine imposed. In another case (a furniture factory) a lad under 16 was employed without a certificate. I directed the occupier to see that the certificate was obtained within a reasonable period. As no advantage was taken of the opportunity given, action was taken and a fine inflicted. In a large clothing factory I also found that sufficient attention had not been given to this section of the Act. Three employees under age were employed without certificates. Action was taken with respect of one of these employees and a fine imposed. I am of the opinion that too much attention cannot be given to this section, as one occupier informed me that he directed a lad desiring employment to apply for a certificate. The medical examination disclosed the fact that the boy was suffering from consumption in its early stages. The result of the examination surprised no one more than the boy's father, who took immediate steps to have the boy medically treated and placed in an institution where he would receive the treatment the disease required.

Regarding the sanitary condition of the factories, I have found that where an employee is set apart to keep the premises clean, the best results are always obtained. Where such work is left to all and sundry there is always evidence of some neglect. I found one factory that needed special attention. Sixteen men were employed and no water-closet accommodation provided. This matter was taken to Court, and a fine of £5 imposed.

When visiting several bakehouses on the double day, I found that sufficient bread-room accommodation was not provided, the bread in one case being placed out in the yard in wooden trays. This matter received immediate attention, and in every case the additional accommodation was speedily provided.

The necessity of providing seating accommodation for females, as provided in section 26, is a matter that is overlooked in some factories. This should not be, as in most cases seats can be provided and the work so arranged that the work of the employees is not impaired. In one factory, where the occupier has been neglectful in providing seats, one of the female employees, who fainted, fell, her head struck the floor, and the injury she received incapacitated her for some time.

Section 39, dealing with means of escape in case of fire, is a matter that occupiers of new factories give reasonable consideration to, but in some cases I have found that the passage-ways inside, leading to the escape, have been blocked.

That important section (33) dealing with safeguards for dangerous machinery has received my earnest consideration, and I still find some cases where this matter receives but scant attention. I have adopted the system of pointing out to occupiers the provisions of the section and their responsibilities under same, also the necessity for them to take immediate steps to safeguard all danger points on machines at the time of installation and not await the Inspector's visit for instructions to do so. I am pleased to be able to state that the effort has, in many cases, borne good fruit. In one case (a large brewery) the occupier informed me that new machinery had been installed and the danger points immediately covered.

Most of the accidents that occurred in my districts were due to carelessness, and with many of the young persons injured, the cause could be attributed to disobedience. The most serious accident, the loss of four fingers, was due to the fact that the guards usually provided on the machine had not been erected.

Mr.

Mr. Inspector H. Henstock reports:—

During the year I have had opportunities of making inspections in city, suburban, and country areas. While the general conditions showed desire on the part of occupiers to conform with the Act and Regulations, there was ample evidence to show the necessity of periodical visits of inspection.

Carelessness of employees in removing guards from machines when doing special work is often a source of danger, as it occasionally happens that the guards are not readjusted when the machine is used for its ordinary work; also the rests of emery wheels are extremely dangerous when not properly readjusted to a wheel reduced by wear.

The matter of fire escape is of special importance, and the ready co-operation I have found with the fire brigade officers in administering this part of the Act, has been the means of much good work being done. I have found a tendency to block up passages to fire escape doors leading to roof in city buildings.

The safeguarding of machines and mill gearing was fairly satisfactory; my experience was that occupiers are mostly ready to fall in with the views of Inspectors, and naturally look to the advice of an expert in these matters. Excessive guards are sometimes placed in parts of a factory, and the simple and ofttimes more dangerous part being overlooked. The advice of the Inspector is generally appreciated in these matters.

I investigated several accidents under section 38, and in most cases found that the cause of the accident was want of ordinary care on the part of the employee. Accidents at power-presses again show this to be a very dangerous machine, particularly when operating a second time, the hands usually having to be placed under the die by the operator. In my opinion, it should be compulsory for these presses to be fitted with a starting gear which would require both hands to set the machine in operation. There are several simple contrivances which would make this effective. The circular saw is also very difficult to effectively guard, and I regret to report that a fatal accident happened to a man who was operating a saw. He was cutting out palings and the saw was apparently guarded. A piece of paling broke while being tailed out and the broken piece was thrown with great force, catching in the saw, and struck the operator in the stomach. He died seven days later in the hospital from internal injuries. A prosecution followed in this case, as the occupier had failed to report the accident until after the death of the employee.

Following on the extension of the Act over the State, I visited the following towns and advised *re* guarding and registrations:—Tumut, Batlow, Gundagai, Adelong, Temora, Ardlethan, Barellan, Barmedman, Wyalong, and Murrumburrah. Special attention was given to flour mills. The urgent necessity of this legislation in country districts was shown by the dangerous state of the machinery in many of the factories visited. I found that much attention was required in respect of sanitary conditions in the country factories. Structural alterations were necessary in several bakehouses to bring them into conformity with the Act. In matters of electrical lighting, special attention had to be given to switchboards, &c.

The extension of the Act over the whole State has made it possible for some useful work to be done in country districts.

Mr. Inspector J. Lynch reports:—

During the period under review I paid special attention to the guarding of all dangerous machinery and mill gearing in the district under my charge. I found factory owners generally willing to comply with orders, but lacking in initiative in the matter of providing against accidents. In many instances I was able to suggest improvements on existing guards, and, on one occasion, to devise an entirely new guard for a very dangerous wood-working machine for which no guard had been previously designed.

Several accidents, resulting in permanent injuries to workers, occurred in my district. The most serious was one in which a foreman in a sheet metal factory lost three fingers in a guttering machine owing to an assistant setting the machine in motion while he was in the act of removing some finished work from the die. No guard has been designed, so far, for this class of machine. In another case a youth lost portions of two fingers in a power-press while endeavouring to remove a piece of tin which had jambed in the die. The guard was on, but he foolishly put his hand around behind the guard and, at the same time, accidentally set the machine in motion. A few minor accidents occurred with circular saws; and one accident, which fortunately did not result in permanent injury, was caused through a whitewasher's bagging apron becoming wound around a shafting. The man was working on a staging about 14 feet from the ground at the time, but he managed to prevent himself from being whirled to death. His body and neck were badly crushed and strained.

The sanitation of the factories also received my attention, and I issued numerous orders on factory occupiers, making for improvement in that regard. I devoted some time to the discovery of unregistered factories, and was able to add a considerable number to the factory list for my district. I also cancelled the registrations of a number of factories which had ceased to exist.

Work in the factories was below the normal during the year, and no marked improvements were made in factory buildings, occupiers for the most part being satisfied to carry on under present conditions until prospects seem to warrant further investments.

On the whole, it appeared to me that, in view of the trying times the nation was passing through, the factories in my district had kept well up to the standard of previous years in their observance of the Factories and Shops Act.

Mr.

Mr. Inspector G. Pickering reports :—

On account of protracted illness I was not able to take up my factory inspections during the first half of the year, excepting at intervals. In the beginning of July I was allotted a district which comprised part of the city and also the Illawarra district as far as Helensburgh, the factories numbering approximately 240, a much smaller district than I had previously inspected. But to balance with this, greater attention was paid to industrial matters.

It is easily apparent how the war has affected some industries. The building trade, for instance, for the last twelve months, has been almost at a standstill, as evidenced by the number of brickworks that have been compelled to close down, and others which have been working only at intervals. Several of the yards have millions of bricks in stock, a circumstance which did not exist prior to the war. The joinery trade is naturally suffering in the same way. On the other hand, the clothing factories are having a very busy time in order to cope with the needs of the military authorities. A number of factories have discarded the manufacture of civilian for military clothing, on account of it being so much easier handled, the latter being practically repetition work.

Sanitation.—The sanitary conditions are, on the whole, fairly well maintained, but in many cases the lime-washing had not been carried out as often as it should have been. Then, also, some of the w.c.'s were not ceiled at the top, the result being that foul air found its way into the work-room. This was easily remedied by covering the top and providing louvres to comply with the regulations.

Dust Exhaustion.—Two exhaust plants were installed during the latter part of the year, one in a wood-working factory and the other in an electro-plating works. The installation of these plants was greatly appreciated by the employees on account of the absence of dust, and also by the employer, on account of the saving of labour in cleaning up.

Guarding of Machinery.—This matter still has my special attention. It appears to me that finality can never be reached in consequence of the various new machines that are being used for manufacturing purposes. The wood-working industry still holds the lead for dangerous machines, most of which cannot be completely guarded without interfering with their operation. The circular saw, for instance, is a difficult proposition; but, in my opinion, the guard on the "Jarman" principle is very efficient. The jointer, or hand-planer, which is the cause of many bad accidents, has had an improved guard added to the many in use. This guard covers the cutter-head, and is self-adjusting to any breadth of timber; which, no doubt, is beneficial, as the operator in most cases will not take the trouble to adjust the ordinary sliding guard. The shaper guard still remains in an unsatisfactory stage on account of the varied class of work done by this machine.

The power-press still has the reputation of being a dangerous machine, and is, in many cases, difficult to guard. I know of instances in my district where employers have devised very effective guards, which made these machines almost fool-proof. Employers sometimes raise the objection that the output is decreased when these machines are guarded; but, in one instance—a machine used to shape the toe-blocking for boots—the guard is so devised that it increases the output approximately fourfold, and with scarcely any risk of accident. The dies, in this case, are completely encased. Another good device is fitted to the power presses used in the manufacture of the several parts of a penny-in-the-slot machine. Two triggers are attached to the operating rod, and have to be worked with both hands before the machine will operate. Thus it is impossible to have the hands caught in the dies.

Accidents.—The accidents in my district have been few, and of a very trivial nature, and need no comment.

Fire Escapes.—I have on several occasions inspected fire escapes in company with the Fire Brigade officer of the district. The outside iron stairs is the usual means of escape; but in one large factory, just completed, an internal fire-proof staircase has been added, which, in my opinion, is far ahead of the outside staircase. Some of the escapes erected in former years have had to be altered to conform with the required standard of the Chief Officer of Fire Brigades.

Prosecutions.—Generally speaking, the endeavour of employers to conform with the Act has been noticeable, and prosecutions have been few. One was for employing boys in a furniture factory, under 16 years of age, without a certificate of fitness. Another prosecution was taken for allowing an apprentice, 15 years of age, in an engineering works, to fire a steam boiler while the fireman went home for his meals. In this case also the boy had not a certificate of fitness. Penalties were imposed in both cases.

Bakehouses.—The bakehouses were, on the whole, well kept, and only in a few instances had I to leave instructions for the occupier to lime-wash. Some bakers make it a rule to lime-wash their premises every three months, not waiting for instructions from the Inspector.

Mr. Inspector A. Waugh reports :—

During the year 1915 the coal, coke, brick, and other trades in the Southern Districts have been very good. The only trade that has suffered through the effects of the war is the building trade.

During the past twelve months I have made inspections under the Factories and Shops Act and the Industrial Arbitration Act in nearly every part of the district, and found that occupiers were always willing to carry out any instructions to guard dangerous machinery, &c. Only

Only one occupier was prosecuted for having his premises in a dirty state. The occupier was convicted and fined.

Two fatal accidents happened in the Wollongong District during the year. In one case the hammer head came off the handle whilst a man was striking a long jumper which was held by another man. The hammer head struck the man holding the jumper, on the side of the head, and killed him instantly.

In the other case, a charge of liquid metal was being run out of a furnace into a pan, and it is surmised that water and slurry were in the bottom of the pan, which caused an explosion. The hot liquid flew up to the ceiling of the large shed, and then fell down upon the crane-driver, who was in a position midway between the pan and the ceiling. The man was so badly burned that he died the following day.

A non-fatal accident happened where an office boy, 15 years of age, was sent into a sawmill by the occupier. The circular saw was in motion, and the guard had been removed. The boy was standing alongside this saw, and in turning to leave the mill, he tripped and fell, and in falling his arm came in contact with the circular saw, and his right arm was taken off below the elbow. Action was commenced against the occupier in the Supreme Court, but a settlement was arrived at, the occupier paying £300 compensation and all expenses.

During the year dining-rooms have been erected at the coke works (9) in the district. These rooms will be a boon to the employees, especially in winter time.

A large amount of my time was taken up with inspections, underground mostly, of a conciliatory nature, and in most cases were successful; and I may point out, that if an Inspector was advised of any alleged grievance, previous to any stoppage of work, I am certain that very little, if any, loss of time would take place.

MR. INSPECTOR H. MCEVOY reports:—

During the first six months of the year I was engaged almost exclusively on industrial work. In conjunction with industrial matters, however, I made factory inspections in a few Western towns, viz., Bathurst, Blayney, Cowra, Canowindra, and Cumnock. These inspections were carried out to assist Inspector Baker, whose district covers a very extensive area.

In some instances I found that bakers and butchers' premises were not built in accordance with requirements of the Act, impervious flooring and ventilation being the principal defects; but little difficulty was experienced in getting occupiers to carry out instructions necessary to bring premises up to standard required.

In July last I was appointed to a district which included a small metropolitan area and a large and scattered area within the county of Cumberland, extending from outside the Municipality of North Sydney to Hornsby on the northern side of harbour, and thence to boundary of Municipality of Parramatta; thence on the Western line to Blacktown, and from Blacktown to Penrith and Richmond. A great deal of time is taken up in travelling to the factories in towns within the area, in some instances miles separating factories in the same town. The train service is also a very limited one—especially on the Blacktown–Richmond line; and to some towns other means of transit is not available. This debars speedy and effective work.

The amount of industrial matters calling for attention within my district prevented my visiting all of the factories under my supervision.

The district being the first one under my control, I am not in a position to draw a comparison of conditions existing in factories in my area and those in other centres.

In general, I found conditions fairly satisfactory, and employers willing to carry out suggestions and instructions given with respect to guarding of machinery and other matters necessary to bring premises into accord with requirements of the Act. One of the chief causes of trouble is that of sanitation; another, that of fire escapes. These matters are more fully reported elsewhere.

Guarding of Machinery.—Power presses and circular saws are a source of anxiety to Inspectors. At times, one notes when making inspection that these are unguarded, but—strange coincidence—the press and circular saw at time of visit is not being operated, although appearances tend to prove that they have been recently used. A warning, however, is given proprietor to guard same before being used. Attention of owners has also been called to section 33 of Act, especially with respect to requirements *re* mill-gearing.

Accidents.—There were but few accidents reported in my district. Of the number, three occurred in printing establishments. A lad had his foot severely crushed between the fly-wheel and rod of ink-duct of printing machine. He was attending to knocking up of paper on fly board, and, being of short stature, was standing on box to enable him to do work easily. This brought his foot level with cam of rod. Evidently the lad got tired of standing, and placed his foot on cam, which carried foot between rod and fly-wheel. Another accident occurred to a female working on an off-set printing machine. The machine had not been working, through slackness; to fill in time the employee was cleaning about machine; she was under the feed-board cleaning part of machine when the machinist came along to start a job. He called out to her that he was going to start machine; she gave the machinist a reply. He then started machine and went a little distance away for some material; the employee, however, kept on wiping part of machine, and her finger got caught in cog-wheel, and was severely crushed. Fortunately, the machine is a very sensitive one, and immediately her finger was caught the machine was thrown out of action, otherwise there was every possibility of her losing her hand. The other instance was of an employee getting his foot crushed between floor of lift and a beam upon which he was standing whilst waiting for lift to descend. This employee had

had opened the door of goods lift before it descended, and did not notice his foot was protruding over lift. The rules of establishment warned employees not to open door before lift was in position. Another accident occurred at a planing machine. The employee had altered the set of knives; he did not adjust same properly. He commenced to use machine, and the wood upon which he was working got jambed; he tried to extricate same without stopping machine, and got top of finger cut. In a foundry where molten metal is used an employee was carrying a ladle of molten metal; by some means the ladle slipped off the tongs, and the molten metal went over the boot and severely burned the foot of another employee.

In no instance could the accidents be ascribed to unguarded machinery or negligence on employer's part. Mostly, the accidents occurred through carelessness or want of thought on the part of the employees.

Child Labour.—This humane and necessary section of the Act is closely watched. Instances occur where lads give wrong age and begin work before a certificate of their birth is obtained. Upon certificate being obtained the correct age is disclosed, and if age debars employment at industry at which they have commenced work the employer is notified. Invariably the lad is immediately discharged.

Sanitation.—In this regard, the chief trouble arises in large buildings occupied by a number of tenants. The conveniences are used by all tenants; and it is almost impossible to ascertain the number of persons using same—inasmuch as all tenants in building do not come within operation of the Act. However, in some instances, it has been found that the requirements of lavatory accommodation are inadequate, and suggestions and improvements and additions have been made and carried out; the altered conditions being appreciated by the tenants. It is astonishing how little interest appears to be taken by incoming tenants to inquire into this matter before taking possession of premises.

Fire Escapes.—This section of the Act has entailed much work and a considerable amount of time. Here, again, the trouble occurs through ignorance or carelessness on the part of the tenant not making inquiries in this regard; or through the landlord not inquiring whether the tenant is going to use premises as a factory. My experience is that dressmakers and milliners are the unfortunate delinquents or victims. The tenants mentioned will start business, perhaps, with two hands; business will increase, and four hands are employed. When it is found that this number is engaged they are notified to register. It is then discovered that they occupy premises above first floor, and a proper fire escape is not provided; registration cannot be granted until requirements of Act are complied with. Trouble often ensues, the owner of premises giving tenant notice to leave premises rather than go to expense of fire escape. The result is the tenant is inconvenienced in her business, and at times suffers financial loss.

Senior-Inspector Miss A. J. Duncan reports:—

The year's work has been occupied by much spade-work of a dull but useful character. The provisions and regulations of the Factories and Shops Act cover many details, some of which, in the course of the rush of a busy year's work in a factory, may very easily be overlooked, and the Inspector has constantly to draw attention to small lapses which can hardly be dignified with the title of a breach of the Act, and yet require to be amended. Thus numberless orders touching the general upkeep of factories have been given and carried out without difficulty or delay. They cover such matters as limewashing of special portions of the premises, as distinguished from the general systematic limewashing; the providing of catches and springs on doors where required; small improvements to the lighting; ventilation and isolation of lavatories; the closing-in of the backs of open staircases used by women; improvements to hoods and flues of iron-heaters; attention to approaches to fire-escapes, which are sometimes regarded as convenient places for the storing of empty cases or bags; the replacing of dress-guards on old-fashioned machines; the provision of additional sanitary conveniences and hand-basins when a busy season has brought about an increase in the number of employees. These and other matters are the daily routine of the Inspector, and afford but little field for comment or report. The keeping-up of constant routine inspection is, in my opinion, of the greatest value, and tends to maintain a standard of generally satisfactory sanitary conditions.

The cleanliness of factories depends almost entirely upon the sense of cleanliness evinced by the person in control; there are some occupiers who are apparently incapable of seeing anything wrong about a condition of general want of thorough cleanliness which does not necessarily amount to such a condition of uncleanliness as would carry a conviction in a court of law, and they are as convinced of the unreasonableness of the Inspector as she is of their want of eyesight.

In large and well-organised factories there is very little excuse for these things, but amongst so-called factories are many small workshops carried on by working proprietors, on whose shoulders every responsibility falls, and who have no time for small repairs, limewashing, or cleaning till after the booking and clearing-up of the week's work has been done and the doors are closed. It is distressing to hear an over-worked man say that he will carry out orders of this kind on Sunday.

I had the satisfaction this year of having two old buildings situated on sloping ground cured of serious dampness in the walls. The condition of one, a laundry in the city, was reported to the City Council, who took the matter vigorously in hand and caused the owner to carry out excavation of rock and drainage at the rear of the building, with excellent results.

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The second, a building in which pickles and grocers' sundries were manufactured, is situated in one of the suburbs. The rear wall, resting for the greater part of its height against a sloping sandhill, received all the soakage caught by a clay-bed situated about 2 feet above the floor-level; the damp permeated the walls on two sides, creating a condition of serious damp and mildew.

The matter presented many difficulties; excavation could not be carried out at one end, because of the risk of disturbing the drainage of a row of houses and the impossibility of preventing a sandy bank from falling in and filling up the trench without elaborate precautionary measures, and in any case these alterations could not be made without the permission of the owner of the land. The side wall, the bottom part of which was new, was not strong enough to support the superstructure if the buttressing of the surrounding sand were removed. The proprietors, two young men who had recently bought the factory with all its defects and the incurred cost of badly-planned improvements, took my representations in a very good spirit, and at a considerable cost drained both walls with gas-piping, and coated them with a new patent material known as "Barvoid," which is guaranteed to be an effective cure for damp.

New factory buildings continue to be erected with great advantage to the workers and to the great satisfaction of the Inspectors, who gradually see the poor and unsuitable buildings of past years passing out of use.

Though the general improvement in factories has been so great in recent years (as all Inspectors can testify), it is taken as such a matter of course that it was a pleasant surprise to me lately to hear a worker, who had spent a lifetime in boot factories, say publicly that only those who had worked in factories in Sydney before the Factory Act came into force knew how much they had to be thankful for. The name of Mr. Jacob Garrard will ever be remembered in this connection.

The question of luncheon-rooms in factories has been much before the Department during the year. In many factories dining-rooms have been provided at the instance of the Inspectors in past years, but the results are very disappointing, except in the case of large and highly organised establishments. Unless the use of the dining-room is a matter of strict discipline and is rigidly enforced by the exclusion of employees from the work-rooms, it is used only by a section of the girls, and I know of cases where, after a few months, the use of the dining-room has fallen into abeyance altogether. There is sometimes an alleged reason for it; but, speaking from a long experience, I believe that the demand for this convenience, which superficially would appear to be almost a necessity, does not on the whole proceed from the employees, and is by no means popular with a majority of them.

In visiting factories during the luncheon hour, little groups of two or three girls are found sitting together in different parts of the rooms, or in the suburbs during suitable weather, out of doors under a tree or on the grass—in some of the city factories on the flat roof. Whether there is or not a dining-room this is found to be the case, and when asked why they do not use the room, various answers are given: "We don't care about it;" "we like this better," and so on. The real reason appears to lie in the formality and want of privacy of a set room, and in the impossibility of having a quiet talk with a chum without being overheard. Some girls like to sit by themselves and read, and nearly all like to get out in the open air during the short time at their disposal if it does not involve a change of dress.

Apart from all this, there are marked distinctions recognised amongst themselves between the different departments in a factory, and if the avocation is such as to soil a dress, the employees dislike mixing with those who are carrying on cleaner work, and *vice versa*. The whole matter has often been discussed with both employers and employees, and is found to be one very difficult of adjustment. I think that where a dining-room is comfortable, well-kept, cool and light, a proportion of the girls will use it voluntarily, and some will not, especially if the number of employees is large. The result of providing dining rooms proves contrary in practice to what might be expected.

Several prosecutions were undertaken for not notifying the working of overtime. In most cases they related to work done on war contracts, and a mistaken idea prevailed that some notice had appeared in the press absolving occupiers from the necessity of a strict observance of the law in the matter of overtime. Certain other cases on the same section resulted from sheer carelessness.

One prosecution was undertaken for non-registration of a factory; the building occupied did not fully comply with the requirements of the Act, and the occupier was foolish enough to establish himself in it without a previous inspection by the authorities. As he could not get the necessary alterations made by the landlord, he shortly after removed to more satisfactory premises.

Employment in factories has been very well maintained during the year, those which are engaged upon the fulfilling of contracts for the Ordnance Department providing much work. But for the immense amount of clothing required for the troops, khaki uniforms, flannel shirts, abdominal belts, and woven underwear, hats and caps, I think the clothing trade might have been very slack. As it was, the order tailoring trade suffered greatly throughout the year as the result of the war. Many tailors enlisted, and the trade fell off, especially in the smaller shops. This can be no matter of surprise, as the ranks of the recruits are made up of young men who in ordinary life are accustomed to buy one or two suits a year, and when the supply of thousands of suits was suddenly cut off, it was obvious that the tailors would be amongst the first to suffer. Many of them express themselves as being thankful if they can pay expenses from week to week. All the trades which cater for the wants of young men are more or less in the same plight, the laundries for instance complaining that the shirts and collars, which make such a large part of their trade, have fallen off.

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All kinds of trades, however, have been requisitoned for war supplies, such as metal badges, harness and saddlery, water bags, hammocks for transports, nose bags and halters for the Light Horse, jam and biscuits for the troopships.

The supply of khaki cloth was not equal to the demand through the winter, as the number of mills and of looms available at the outbreak of war was quite inadequate. As time has gone on it has been found difficult to get new looms delivered from America and elsewhere, and until the looms are available new weavers cannot be trained, consequently the contractors for making clothing have from time to time been held up for want of cloth.

In the month of September in connection with the extension of the Factories and Shops Act to the whole State, I received instructions to visit certain country towns and give preliminary information to occupiers coming for the first time within the purview of the Act.

I visited Yass, Harden, Murrumburrah, Young, and Grenfell. As for the first time I was expected to visit factories where men only were employed, it was necessary to point out the obligation of occupiers to fence and guard machinery and otherwise to pay some attention to matters touching the welfare of male employees. I found a very ready interest in matters of guarding amongst employees, and had occasion to observe that there was little, if any, protection of dangerous parts of machinery, save in exceptional cases.

I was, on the whole, very well received in all the towns, though in certain cases the well-worn reasons for doing nothing were advanced with the usual vigour ; as it is always better to endeavour to convince employers first, that the orders given are founded on experience and necessity, and next, that they will certainly be enforced, one is sometimes obliged on a first visit to spend time in arguments which are tedious and on rare occasions amusing and humorous.

In one old town, I found two of the most ancient and dilapidated printing offices that I have ever seen ; no women were employed in them, and they were in their existing condition unsuitable in the highest degree, although capable of being improved. The flour mills were nearly all about to instal new machinery, and in one case, having mounted to the first floor, I declined to proceed further, as it would have involved walking a plank over a yawning chasm, the floors having been taken up. In no case was the machinery guarded, and in some it appeared to be in a highly dangerous condition. As, however, there are not many persons employed, the risk to the expert miller employed is not as great as it would be to a staff of young or irresponsible employees. The question of fire escape arose only in these mills, but there appeared to be no practical difficulty in the way of providing escape across adjacent roofs of sheds. The local head of the fire brigade was generally a tradesman in business in the town.

So far as the employment of women in workrooms was concerned, I found it to be quite inconsiderable in amount. A few girls were employed in tailors' shops, a very few in dressmaking rooms, and one or two in printing offices. I found one new and well-installed steam laundry in Young.

One good little bakehouse had been designed by a French-Canadian baker, who had served in the Navy, and knew exactly what he wanted.

One baker was obliged to put up a bakehouse at his own expense, while a good bakehouse and shop stood empty, because the rival bakers preferred to pay the rent of the building and keep a competitor out of the principal street. Some of the coachbuilders and wheelwrights were somewhat disconcerted at finding that boys under 16 years were prohibited from work on certain machines, and thought it interfered with their usefulness as apprentices and prevented them from making progress. A printer advanced the same objection, and suggested the breaking of the indentures.

In most towns the general sanitary conditions were well looked after by the local Sanitary Inspector, and the faults in workshops were principally want of lime-washing and guarding of machinery. I found one tailor's shop overcrowded, and I called upon the occupier to provide some additional air bricks for the benefit of the occupants during the cold winter, when doors and windows are sure to be closed.

The bakers complained very much of bad trade during the previous winter, and said that many people were baking their own bread. I found two bakers using one bakehouse to supply their respective shops in order to economise expenses.

The prospects of a good wheat harvest were very bright at the time, and hopes were expressed of better trade for the coming season, but at the moment all trade was very slack in the various towns. The general conditions of these country towns in agricultural districts struck me as very much better than those which used to obtain in the old industrial towns of Newcastle and Lithgow.

Inspector Miss J. G. Harriott reports :—

During the year the activity in women's work has, as a whole, continued in a wonderful manner, in spite of predictions and fears arising from the abnormal conditions prevailing.

The order-tailoring trade has, I think, suffered most as a direct consequence of the war. In the middle of the year there were general complaints about slackness, and some of the smaller establishments were not able to weather the storm.

In the latter months, however, the women's work in the trade became more uniform.

Clothing factories, especially those employed on military work, were very busy and absorbed many workers who would otherwise have been unemployed. The notice, "Machinists Wanted," is constantly to be seen displayed outside these factories. By the action of the Defence Department, overtime has been forbidden to be worked on any military orders. This restriction has been of great benefit to the workers, and has not, I feel sure, led to any decrease in the output. Special

Special arrangements were made for the working of extraordinary overtime in woollen mills.

During the earlier part of the year anxiety was felt by the occupiers of knitting factories where Circular Knitting Machines are in use. It was feared that a serious shortage in the supply of needles would lead to the non-fulfilment of military orders for knitted sweaters and undergarments, and that hands would be thrown out of work. Owing to the difficulties in obtaining yarn and needles these factories went through an anxious period. The needles used in the circular machines are finer and more intricate than those used in flat machines, and have in the past been imported from the Continent. Several hundreds are often broken weekly in a single machine, and the difficulty in replacing them was great. This shortage has now been overcome to a great extent by the action of the Home Authorities in arranging for the export of needles to the Australian factories.

One of the events of the year in my district was the opening of a match factory. This, I believe, is the second of the kind in Australia. Only wooden safety matches are so far made, and no dangerous materials are used in the process. The factory is a fine, up-to-date one, and the convenience of the women employed is well considered.

Breaches of Factories Act.—Four employers were prosecuted and fined for non-payment of tea-money. In most of these cases ignorance was pleaded; but it seems almost incredible that business people should be so lax in method as not to attempt to find out the law, especially when a clear statement of it is posted in notices on the walls of the factories.

Several cases were taken for employing young persons under 16 years of age without medical certificates, and for not recording and notifying overtime to the Department.

Two employers were fined for dirty premises. In one bad case a country tailor, who admitted that the workroom had not been swept for three weeks, pleaded not guilty to the charge. Whenever the room was cleared up the dirt and clippings were simply swept through a hole in the floor. The whole space under the flooring boards was covered with the litter. The same man was also fined for what seemed a wilful attempt to deceive the Department in regard to the working of overtime.

A jam-making firm was prosecuted and fined for working some of the women employed over eighty times during the year.

It must be said that a great deal of the overtime, as is constantly the case in jam factories, consisted of periods of from a quarter to half an hour in the day.

Sanitary Conditions in Factories.—Though the new type of factory building, with its greater facilities for improved sanitary conditions is increasing, yet there is constant work for the Inspector in this direction. Unfortunately some of the older buildings remain, with their conditions growing worse naturally every year. In many cases the war has caused to be put on one side plans which were ripening to completion for their reconstruction.

In one of the city arcades the only water supply for some of the workrooms was situated in a dark and undesirable position. After great difficulty, owing to disputes between the joint owners of the Arcade, the matter was remedied, and a proper water supply and fixed wash-basins provided.

In another old city building, in which a printer opened a small factory, the only sanitary convenience was found to be in a very bad state of repair, and almost without ventilation to the outer air. The owners were forced to remedy it, and to repair and clean the building generally. This being an old place, the bad conditions were not so much to be wondered at, but my astonishment was great when, on inspecting a new building, I found that two sets of sanitary conveniences had been put in with practically no ventilation to the outer air. The architect had done this, I was told, to decrease the insurance rates for the owner of the building, who only had the extra expense of putting in ventilators after the completion of the other work.

A city tailoring factory, which has long been a source of trouble on account of its dilapidated state, has now been brought up to a more modern standard. This work had hung fire for some time owing to a proposed city resumption.

In a large printing factory, I found the table in the dining-room being used for hand bronzing. The table was covered with the dust. I had this practice stopped at once.

In a factory in which old rags are subjected to a chemical process whereby any cotton in them is destroyed and the wool left, women are employed in the preparatory work of sorting over the rags, which are in a very dirty condition, and have the appearance of having been gathered from rubbish tips. The women separate the woollen from the cotton goods, and cut off any large portions of cotton material. The rags come to the factory in sacks, and before being handled are supposed to be disinfected by steam pressure in accordance with the requirements of the Noxious Trade Act, but it is dirty work, and a great deal of dust falls out in the sorting. The employer tried to induce the women to protect their heads by wearing caps which he provided, but without success as they complained of the heat, respirators would be out of the question for the same reason. I visited the factory in company with a medical officer from the Board of Health, and at his suggestion the women are now provided with cans of disinfectants, and the rags are constantly sprinkled to keep down the dust. Without doubt, the most effective measure would be to put the rags through a dust extractor before they are handled, but this would not be possible under present circumstances owing to the great expense involved.

In a factory where a household cleansing powder is manufactured, I found the dust, especially near the packing table, was excessive. After a good deal of consultation, the arrangement of the bench was altered, and the top of the table formed of perforated metal, so that the loose powder does not accumulate on it over much. By these means the evil has been lessened to a great extent.

Country Inspections.—During the early part of the year I visited Lithgow, Mudgee, and Gulgong. In the two latter towns several prosecutions were considered necessary under the Industrial Arbitration Act. In October and November I was sent to Forbes, Parkes, Condobolin, Peak Hill, and Wellington, to open up the district under the Factories and Shops Act, which from July 1st was extended to cover the whole State.

In the first four mentioned towns I find the ordinary conditions of country workrooms prevailing, the rooms being on the whole fairly good. In Wellington, however, a few of the workrooms were badly in need of inspection, and orders were left to clean and repair them. This town is laid out in a peculiar manner, and in some cases one backyard has to do duty for two or three shops, so that the sanitary arrangements are not good.

In the course of my country inspections I found that only in one factory visited had any serious attempt been made to guard dangerous machinery. In this factory—a joinery—a man met with a bad accident just after the district had been proclaimed under the Act. The belt of a planing machine came apart at the joint, and the small metal clips used to form the joining flew out and struck the man on the leg, one of them causing the breaking of a blood-vessel. This led the owner to have all the dangerous parts of the machinery in the factory well guarded.

The extension to country districts of the provisions of the Act relating to the safeguarding of machinery must prove a great blessing to the workers, and was welcomed generally by the employers, who, for the most part, showed great interest in the subject.

Very little overtime had been worked by the women during the year; but, on the whole, I find that work was steady, and that there was no talk of unemployment.

INSPECTOR MISS B. GOLDING REPORTS:—

The year 1915 will be a memorable year in the Industrial History of New South Wales, as the year the Factories and Shops Act was made law throughout the whole of the State, thus extending protection to all employees who work in any place which can be designated a factory.

The year has been a very busy one through the extension of the Act and various other causes.

In the beginning of the year, grave doubts were entertained that the War would have a serious effect on trade and employment of labour; but these doubts were soon dispelled, as up to the end of 1915 no serious results accrued. Certain traders were affected, but not to the extent anticipated.

During the year I could not give the time desired to my city and suburban districts, as a certain amount of country work had to be performed.

I was absent in Country districts at different periods, from February to October, in all 68 days.

Unless inspectors are constantly round their districts, even fair employers are likely to become lax.

Food Factories.

Biscuit Factories.—Early in the year I visited a large Biscuit Factory, and found the sanitary arrangements most unsatisfactory, and of the roughest kind, no seats on the conveniences, and no doors; this factory had been established over ten years.

Instructions were given to provide doors and fittings to each W.C., and a certain time was given to carry out instructions. After the period had elapsed, on visiting again, found no effort had been made to comply with the law; under these circumstances, action was taken, and a fine of 40/- and costs the result.

The machinery in many cases was not guarded, in others the guards were not secured; action was also taken for this breach, a fine of £5 was imposed. This same employer worked a boy under 16 years, overtime from 6.30 p.m. to 1.45 a.m., next day, no tea money had been paid. I recommended prosecution in both cases; in each a verdict was gained.

In a Newcastle Factory the Machinery was in the same condition as above, action was taken, the case was dismissed. However, after my visit, the machinery and belts to which I took exception were most securely guarded. In this factory no seats were provided for female employees; action was taken, a fine of 40/- and 6/- costs, the result.

At different periods of the year, employment fluctuated, not from loss of trade, but shortage of flour and sugar. At other periods this loss of trade was made up to the employer by large military contracts.

Jam Factories.—Conditions in many of these factories are always a vexed question. As a rule the industry of Canister making is also carried on in conjunction with Jam making. In one factory a small boy was employed on a guillotine, a most dangerous machine. I recommended action, a substantial fine had the desired effect.

In the same factory I found a girl with a badly scalded hand. She stated, "another girl had accidentally scalded her with hot jam;" this explanation had to be accepted. Seating accommodation is one of the vexed questions. Employers think girls do

do more work standing; of course this is not so; they never think of the after results, when these girls become wives and mothers. Girls suffer very much with sore hands when certain fruits are being preserved, the acid, etc., affecting them.

In one factory where about 100 employees were working, no wash basins were provided, just three old kerosene tins filled with water. In the interest of consumers as well as employees, prosecution was instituted and a verdict gained.

When boys and girls were employed mostly during school holidays, employers would say, "We let them run round, and work when they felt inclined, and eat as much fruit as they please." On any occasion I visited these conditions did not prevail, but downright hard work.

Slackness of employment was not of a serious nature; here also it was put down to scarcity of sugar through certain restrictions controlling this commodity.

Pastry Factories.—Trade is rarely ever slack in this line; I found no depression, but on the other hand very excessive overtime worked by employees. Of course proprietors complained of a shortage of butter, flour, and sugar, and in some small factories, at times, through this, work might have been slack.

In making an inspection in a large factory I discovered it had been the practice for years to work a certain number of girls all day on the Sunday before a public holiday seven, eight and nine hours overtime, no record of which was kept, and no notification sent to the Department, and thus it has escaped notice for so long a period. This being a deliberate breach, action was taken in four cases and verdicts gained in each.

Meat Canning.—This is a class of work not suitable for women. I consider only men and boys should be employed in these factories.

The work is rough and trying, as a considerable amount of standing is necessary to carry out the duties; the floors are concrete, and constantly wet, which is injurious. It is most difficult to keep employers up to the mark *re* seating accommodation.

In one factory I found men and women eating their lunch in any dry corner of the factory they could find, also sitting on heaps of coats; however, at last I sueeeeded in having a dining-room provided for both men and women.

At one factory, a great amount of overtime had been worked, six girls stated no overtime rates had been paid, but in the presence of the manager went back on their statements (doubtless they were afraid of dismissal).

Employers have been very lax *re* providing wash-basins for male employees. However, this has been remedied in my districts.

At times employment was very slack, not through want of trade, but scarcity of meat.

Confectioners.—This class of trade gives a great amount of employment to girls and boys, providing conditions are good, the work is light and suitable for them.

In one large factory, the guarding of machinery was very defective, but as their conditions were fairly satisfactory, time was given to carry out instructions, which was done before the time expired. In another factory which was in operation for about two years, I found a W.C. opening into the boiling room; the Department had this matter remedied. Employment, during the year has been good; of course, this trade was also affected through the shortage of sugar, but as it was not for long, it had no serious results.

Pickle Factories.—Employment in these factories is always constant. Conditions governing this work are not as good as could be desired. The work is very trying, and the rate of wage low. A great number of elderly women find employment onion-peeling, &c.

It is a difficult task to make employers keep the floors in good order, as in most factories they are concrete, and, as the work is sloppy, they are always wet.

Clothing Factories, &c.

Woollen Mills.—This has been a record year for woollen mills, working day and night for male, and very excessive overtime for female employees.

Very little thought has been given for the comfort of employees.

No seating accommodation has been provided in any of the mills for girls, with the exception of machinists and menders; in some mills I even found menders without seats. However, after months of visiting and interviewing, seats were provided for the first time since the inception of this Act. To the credit of one company seats were provided within three weeks from my first visit.

These girls are working $8\frac{3}{4}$ hours per day standing on a concrete floor (between some of the looms boards are laid down, not for the comfort of the worker, but to make them high enough to work the looms). Many of these poor girls suffer with varicose veins and other ills caused through standing.

In one mill, where some hundreds are employed, no dining room was provided. Visiting on a wet day at lunch hour I found the employees sitting on the floor eating their lunch. No presses were provided for their lunch baskets, some of which were under the looms, others in a space with ten conveniences opening into it. The management denied all knowledge of this, and stated they would not have permitted it. Hats, coats, &c., were hanging here and in various parts of the mill. This firm had promised the Department to provide dining and dressing rooms nine months previously, and had plans for same, but had neglected to have them erected. However, by the end of the year they carried out their promise.

In

In several mills the machinery was in a very bad condition, much unguarded, and some of the guards most unsatisfactory. Action was taken, and £3 fine was the result.

It was the practice at one mill for a youth to climb on one machine to remove the belt off a large wheel whilst it was in motion, no belt shifters being provided. However, this matter was remedied.

In another mill a dining room had been provided, but was in such a dirty condition that the employees would not use it. On bringing the matter under the notice of the management, arrangements were made with one of the male employees to keep it clean.

In several mills no doors were provided to the enclosure where the W.C.'s were, and no locks on the doors. I had this attended to. Action was taken for not notifying overtime worked. There is much to be desired *re* conditions under which employees work.

Tailoring Factories.—Ready-made clothing factories were kept very busy, and on the whole conditions were fairly satisfactory, except in some instances where excessive overtime had been worked and was not notified; in other cases tea money was not paid. Action was taken in several cases, and adequate fines imposed.

A certain firm had never paid their forewomen overtime since the inception of this Act. Action was taken in two cases; a verdict of 40s. was given in each case. Several factory proprietors were prosecuted for dirty premises. Through military contracts many factories were kept very busy.

In work-rooms where order and chart work is carried on, a great depression in trade and employment was experienced at various periods of the year; this was due to so many enlisting.

On the average every man has two suits per year, so that when thousands went to the front this loss of trade was felt, and particularly when men's mercery business was carried on in conjunction with the tailoring, as each new suit meant in most cases a complete outfit.

The girls who lost employment in these factories were soon absorbed in the many shirt and tailoring factories doing military work, as immense contracts were given out for shirts, flannels, belts, &c.

A factory was started by the Women Workers' Union, on the co-operative system, for middle-aged and inexperienced women. Large military contracts were obtained for shirts, flannels, and belts, with the result that now it is in full swing, and these women working there, after a few weeks' tuition in shirt-making and machining, are earning good wages. Many of them are buying their sewing machines on the time-payment system.

Dressmaking, Blouses, &c.—A depression of trade and employment was felt in the fashionable establishments, dressmaking and millinery. But a great increase of trade and employment was the result in the cheaper work-rooms and factories. Several new blouse and dressmaking factories were started, so that they gave employment to the many who in the early part of the year lost their employment. Most women practised a little self-denial, and where three and four guineas had previously been paid for a costume, they went to the cheaper places. This also was the case with millinery; then the expensive establishments took the hint and reduced their charges.

In every work-room in my district I found employment good.

Occasionally sanitary conditions are not over satisfactory. One large city firm was prosecuted for breach of Regulations 15 and 16.

Boots and Leather Goods.—No lack of employment occurred in these lines. Trade has been very good; this is proved by the amount of overtime worked.

Sanitary conditions in many places are the principal trouble. In one suburban factory I found the premises in a disgraceful state, and no wash-basins provided for the men. On action being taken, the magistrate imposed fines of 60s. and 40s. with costs.

In some other places instructions had to be given *re* lime-washing and cleaning up generally.

Printing.—This year, as last, my chief troubles in these factories were dirty premises and unguarded machinery. Action was taken in a number of cases for breach of section 33. The magistrate commented on the dangers incurred, and fines ranging from £2 to £10 were inflicted. On again visiting I found instructions had been carried out; some of these firms were established over eighteen years.

Quite a number of prosecutions had to be taken for dirty premises; fines ranging from £2 to £5 were given. This had a good effect on other proprietors; also drew forth from their journal a chapter of instructions to all master printers.

Many employers seem to think that it is not their duty to provide wash-basins for male employees, and this has caused some trouble.

Also that seating accommodation for women is of no consequence.

I would like to see the Act amended, making it compulsory to provide seats for male employees. Also dressing rooms, as these are an absolute necessity in some trades. Every year I feel I should bring these two matters under notice.

Dining rooms are lacking in many places. In others they are so neglected and so situated, that self-respecting employees will not use them. I have found dining-rooms with the lavatories opening into them. Of course, there are some employers who give every thought to these matters.

Others will say, it is space wasted, the girls will not keep them clean, &c. Considering they only get half or three-quarters of an hour for lunch, and will not be given

given time off from work, when are they to sweep and scrub dining-rooms? It is a moral obligation on employers to see to the comfort of their employees in this respect, and to provide them with clean, healthy surroundings.

Country Duties.—During the year I visited Newcastle, Maitland, Kurri Kurri, Cessnock, and Gloucester. In all these places I found the Factories Act practically ignored. Work-rooms in Newcastle and Maitland were in a dirty, unhealthy condition. Action was taken against many occupiers, the magistrate fully recognised his responsibility in these cases, and imposed fines from £3 to £5.

The machinery in many instances was most unsatisfactorily guarded, or else not guarded at all. In these cases fines were imposed, which did not nearly meet the breach.

In very many establishments and factories, overtime records were not kept. Many employers resented action in these matters; others said, "we deserve prosecution for our carelessness."

Later in the year I visited all the towns from the Paterson to Taree, and from Tenterfield to Tamworth, *re* the extension of the Factories and Shops Act. In no town did I meet with any opposition; on the contrary all seemed anxious to comply with the provisions of the Act.

In regard to section 33—guarding of machinery—I was surprised to find in many places guarding quite equal to any in the city, whilst in others it was nil. It was quite a common sight to see workmen minus fingers, and I saw three cases where men had lost a hand, in several where all the fingers of one hand had been taken off. The employers were anxious to know a sure method of guarding circular and other saws, and various other machines.

Trade was very good in all the towns, and any amount of work for those who wanted it.

In the butchering trade, work was slack owing to the scarcity of cattle.

In butter factories, employment had fallen off, where 8 tons per week were produced some time back, at the time of my inspection, 1½, 2, and 3 tons only were manufactured.

In several districts flour mills were closed down. This was a blessing in disguise, as many of the mills were in a dilapidated condition; as they were closed down the proprietors were having them repaired and thoroughly renovated.

Mr. Inspector Huntley, Newcastle, reports:—

During the whole of 1915 my time was fully occupied in connection with the local Department Labour Exchange, and had no opportunity for inspectional work under the Factories and Shops Act, Messrs. Inspectors Gregory and Young performing such duty in my stead.

Mr. Inspector G. Gregory (Newcastle), reports:—

Periodically I have made inspections of the Newcastle districts, and of the towns extending north as far as Singleton and Cessnock. In several instances notices have been given to occupiers to guard machinery, and complied with in all cases immediately, and in only one instance, after notice had been given the occupier to register, was prosecution necessary, when suitable penalty was imposed by the Magistrate, which had the desired effect.

I found in all cases the ventilation, light, and sanitary accommodation in fairly good state, no complaints from employees, and where any slight defects in regard to the above matters existed, I immediately drew the occupier's attention, and same was rectified at once. My factory work has been done in conjunction with Inspectors Huntley and Young, and the districts here mentioned have also been under their supervision.

The greater portion of my time has been devoted to industrial work, and now the districts are divided by boundary lines, I think it more conducive and interesting to work the allotted areas apportioned to inspectors.

Mr. Inspector G. R. Young (Newcastle) reports:—

During the year 1915, in the Newcastle Factories and Shops District, my duties were divided between the Early Closing Act, Industrial Arbitration Act, and Factories and Shops Act. In addition to the Newcastle district, which extends from Woy Woy to Singleton, I also visited several other country centres. Following upon a visit of Inspector Miss Golding to Newcastle, I made a systematic inspection of the factories in the district. In a number of factories visited I found that employers were careless as to the posting of abstracts and copy of the Act. Machinery I found very well guarded according to directions given by previous inspectors. In some cases I served cards upon employers, requesting additional guards, and found the employers throughout the district very willing to attach guards or carry out any direction given.

Sanitary arrangements were generally satisfactory. Some complaints I investigated I found were more against the pan system rather than the cleanliness, and as part only of the district was sewered, this could not be altered.

Ventilation and lighting I found to be good.

Factories increased during the year, and business, generally speaking, in the district was good. With the exception of sawmills, some of the smaller ones closing down and others only working a couple of days a week for the purpose of cutting orders.

Mr.

Mr. Inspector F. V. Field (Broken Hill), reports :—

The mining industry, on which the prosperity and trade of the City depend, has been infinitely better this year than was the case in the latter part of 1914. Metal prices have reached a much higher level, and in consequenee the large mining companies have been working full time.

The labour employed along the line of lode is about one-half of what was employed before the outbreak of war.

At the present time Broken Hill is threatened with industrial trouble. The underground men have been missing the afternoon shift every Saturday, with a view to the mining companies granting them a 44-hour week. Unless wiser counsels prevail serious consequences will follow in the New Year.

Many employers report that trade has deteriorated this year, and especially is this the case in tailoring and dressmaking establishments. The industrial disputes and dislocations to a great extent seriously affected trade.

The general sanitary conditions of the factories have been well maintained during the year. The inspector has not the same trouble in Broken Hill as in Sydney, as in every factory the water-closets are built right away from the workrooms.

In his annual report a previous inspector enlarged on an up-to-date bakehouse in this district. Another bakery firm is at present placing an up-to-date plant on their premises.

Evidently there are some people who have great faith in this remote corner of New South Wales.

Guarding of machinery has been well maintained, only three aecidents having been reported for this year. Two were minor accidents, but the third was more serious. The man was feeding an Enterprise sausage machine, and was not watching his work, and two fingers were caught in the worm of the machine.

During the year 24 factories have been registered, and 19 cancelled. The largest factory registered being the "Barrier Munitions Company Proprietary Limited," which is situated on the Zinc Corporation Lease.

This factory, when the new turret lathes arrive from America, will employ 100 hands, and be capable of turning out 3,000 18-lb. high-explosive shells weekly. All gauges necessary for shell making have been made in the tool-shop adjoining the main shop, and are of excellent finish. The power needed to drive the machinery is supplied by the Broken Hill South Silver Mining Company, and the Zinc Corporation Limited.

Two Chinese have had their laundries re-built of stone, both places being very commodious.

Twenty-one certificates cf fitness have been granted to boys between the ages of 14 and 16, the majority being employed in aerated water factories. No complaints have been made of the non-payment of overtime and tea money.

APPENDICES.

ALL FACTORIES AND SHOPS DISTRICTS.

Table I.

Number of Factories on Register—1911–15.

	Metropolitan.	Newcastle.	Broken Hill.	Western.	Goulburn.	Albury.	Other.	Total.
	Factories on Register.	Factories on Register.	Factories on Register.	Factories on Register.	Factories on Register.	Factories on Register.	Factorie on Register.	Factories on Register.
...	3,843	569	73	255	125	104	...	4,969
...	3,989	589	125	266	137	97	...	5,203
...	4,322	572	129	287	149	102	..	5,761
...	4,579	583	148	308	188	187	...	5,993
...	4,758	579	156	362	205	187	1,178	7,425

Table II.

Number of Persons employed—1911–15.

Metropolitan.		Newcastle.		Broken Hill.		Western.		Goulburn.		Albury.		Other.		Total.		
les.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males	Females	Males.	Females.	Total.
,085	25,420	4,290	1,177	576	187	2,994	345	620	141	395	120	...	...	60,960	27,390	88,350
,559	26,108	4,434	1,290	720	267	2,564	329	657	143	385	126	...	...	64,319	28,263	92,582
891	26,314	4,637	1,346	751	269	2,680	346	709	133	378	130	...	...	67,046	28,538	95,584
455	24,884	4,348	1,129	593	198	2,666	302	636	116	638	176	...	...	63,336	26,805	90,141
891	26,438	5,137	1,185	671	143	3,036	311	674	102	579	144	5,529	383	70,517	28,706	99,223

Table III.

Horse-power of Machinery used—1911–15.

Metropolitan.		Newcastle.		Broken Hill.		Western.		Goulburn.		Albury.		Other.		Total.	
Factories.	Horse-power.	*Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.
231	60,598	316	7,290	31	770	126	10,456	55	676	34	320	...	...	2,793	80,110
385	77,129	351	6,663	67	1,188	143	9,027	66	961	33	336	...	...	3,345	95,304
219	84,993	351	6,851	71	1,231	145	9,017	70	999	34	366	...	...	3,590	103,457
291	95,043	353	8,554	84	1,288	174	9,222	79	945	66	749	...	...	4,047	115,801
345	98,470	350	9,088	79	1,198	194	10,993	88	1,253	60	769	711	10,825	4,627	132,506

* In many factories more than one kind of power is used ; the figures in this column, therefore, are in excess of the actual number of factories using power.

Table IV.

Number of Persons employed in each District—1915.

trict.	Number of Factories on Register.	Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
politan	4,758	2,324	2,549	3,912	4,276	5,200	6,123	43,455	13,490	54,891	26,438	81,329
s	579	193	140	385	278	440	318	4,119	449	5,137	1,185	6,322
ill	156	33	7	59	32	53	42	526	62	671	143	814
rn	362	49	22	141	43	195	87	2,651	159	3,036	311	3,347
n	205	18	6	31	16	54	29	571	51	674	102	776
.....	187	15	5	38	26	65	29	461	84	579	144	723
.....	1,178	140	14	382	50	478	76	4,529	243	5,529	383	5,912
Total	7,425	2,772	2,743	4,948	4,721	6,485	6,704	56,312	14,538	70,517	28,706	99,223

ALL FACTORIES AND SHOPS DISTRICTS—*continued.*

Table V.

Horse-power of Machinery used in each District—1915.

District.	Steam.		Gas.		Electricity and other.		Total.	
	Number of Factories.	Horse-power.	Number of Factories.	Horse-power.	Number of Factories.	Horse-power.	*Number of Factories.	Horse-p
Metropolitan	485	56,678	677	11,577	1,983	30,215	3,145	98,4
Newcastle	150	5,957	69	1,477	131	1,654	350	9,0
Broken Hill	11	515	25	314	43	369	79	1,1
Western	70	8,800	75	839	49	1,264	194	10,9
Goulburn	32	481	26	592	30	180	88	1,2
Albury	13	357	25	263	22	149	60	7
Other	253	6,916	145	2,270	313	1,639	711	10,8
Total	1,014	79,704	1,042	17,332	2,571	35,470	4,627	132,

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using pow

Table VI.

Classification of Factories in each District, according to Number of Persons employed—1915.

District.	Number of Factories in which the number of hands employed are—															
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.
Metropolitan	1,861	1,362	696	299	148	130	76	34	67	33	25	8	7	7	4	1
Newcastle	305	156	62	18	12	12	5	1	3	1	2	...	1	1	...	...
Broken Hill	95	42	12	3	2	1	...	...	1	...	...	...	...	...	...	...
Western	208	102	33	8	2	4	1	1	...	...	1	...	1	1	...	...
Goulburn	133	50	17	4	...	...	1	...	...	...	...	...	...	...	...	...
Albury	125	43	17	2	...	...	...	...	...	...	...	...	...	...	...	...
Other	684	382	84	11	11	...	1	1	4	...	...	...	...	...	...	...
Total	3,411	2,137	921	345	175	147	84	37	75	34	28	8	9	9	4	1

Table VII.

Number of Persons employed in each Class in Districts—1915.

Class of Factory.	Metropolitan.	New-castle.	Broken Hill.	Western.	Goul-burn.	Albury.	Other.
I. Treating raw materials, product of pastoral pursuits	2,266	16	1	45	12	4	192
II. Oils and fats—animal, vegetable, &c.	723	177	2	5	.....	.....	13
III. Processes in stone, clay, glass, &c.	4,223	321	11	1,042	144	52	64
IV. Working in wood	3,847	550	70	143	60	47	1,152
V. Metal works, machinery, &c.	10,889	2,185	196	770	26	55	344
VI. Connected with food and drink, &c.	12,744	963	212	465	179	169	1,919
VII. Clothing and textile fabrics, &c.	22,956	1,070	146	369	191	161	639
VIII. Books, paper, printing, and engraving, &c.	6,465	251	75	117	48	73	483
IX. Musical instruments, &c.	339	.....	... ...	.....	... ..	.....	.....
X. Arms and explosives	17	11	... ..	.....	.....	.....	.....
XI. Vehicles and fittings, saddlery, and harness, &c.	2,645	239	39	200	77	128	815
XII. Ship and boat building, &c.	1,792	40	.....	.....	.....	.....	.....
XIII. Furniture, bedding, &c.	3,533	149	2	7	4	3	64
XIV. Drugs, chemicals, and by-products	1,397	9	6	.....	3	.....	.....
XV. Surgical and other scientific instruments	92	1	.....	.....	.....	.....	3
XVI. Jewellery and plated-ware, &c.	552	17	.....	.....	.....	3	.....
XVII. Heat, light, and power	3,300	180	38	150	22	12	183
XVIII. Leatherware, n.e.i.	646	.....	.....	.....	.....	.....	.....
XIX. Minor wares, n.e.i.	2,903	143	14	34	10	16	41
Total	81,329	6,322	812	3,347	776	723	5,912

METROPOLITAN DISTRICT RETURNS.

This District was proclaimed on 1st February, 1897, extended on 1st August, 1904, and further extended on 3rd October, 1911.

Table VIII.

Classification of Persons employed—1906–1915.

Year.	Number of Factories on Register.	Persons employed.								
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
.....	2,790	2,017	1,891	4,040	3,704	30,143	11,996	36,200	17,591	53,791
.....	2,840	2,233	2,082	4,122	4,023	32,802	12,958	39,157	19,063	58,220
.....	3,142	2,138	2,059	4,225	4,345	*35,306	*14,321	41,669	20,725	62,394
.....	3,396	2,104	2,309	4,221	4,477	37,547	15,613	43,872	22,399	66,271
.....	3,670	1,981	2,225	4,284	4,645	41,291	16,659	47,556	23,529	71,085
.....	3,843	2,033	2,406	4,277	4,694	45,775	18,320	52,085	25,420	77,505
.....	3,989	1,881	2,406	4,117	4,430	49,561	19,272	55,559	26,108	81,667
.....	4,322	1,892	2,405	3,976	4,442	52,023	19,467	57,891	26,314	84,205
.....	4,579	1,874	2,304	3,488	4,107	49,093	18,473	54,455	24,884	79,339
.....	4,758	2,324	2,549	3,912	4,276	48,655	19,613	54,891	26,438	81,329

* ior to 1908 the ages of hands up to 18 years only were collected. The form of return has now been altered so that the ages of persons between 18 and ay be included, and are shown in the Tables dealing with age-groups of 1915.

T numbers of persons over 18 and under 21 years of age since 1908 are:—

	Males.	Females
1908	5,496	5,329
1909	5,786	5,764
1910	6,163	6,191
1911	6,316	6,554
1912	6,314	6,650
1913	6,339	6,533
1914	5,591	5,837
1915	5,200	6,123

Table IX.

Horse-power of Machinery used—1906–1915.

Steam.		Gas.		Electricity and other.		Total.	
No. of Factories.	Horse-power.	No. of Factories.	Horse-power	No. of Factories.	Horse-power.	*No. of Factories.	Horse-power.
548	26,013	554	3,956	338	2,669	1,440	32,638
543	26,172	561	4,196	394	3,264	1,498	33,632
539	29,071	578	4,390	481	4,052	1,598	37,513
542	33,874	587	5,254	513	4,297	1,642	43,425
518	36,829	708	10,247	888	9,833	2,114	56,909
546	39,488	718	10,455	967	10,655	2,231	60,598
502	49,500	737	10,861	1,446	16,768	2,673	77,129
513	51,749	745	11,852	1,661	21,392	2,919	84,993
504	56,157	719	11,886	2,068	26,983	3,291	95,043
485	56,678	677	11,577	‡1,983	‡30,215	3,145	98,470

any factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using power.
‡ Including 34 factories using oil of 796 horse-power.

Table X.

Classification of Factories according to Number of Persons employed—1906–1915.

Y.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
.....	686	987	530	206	86	117	52	20	49	30	15	4	3	3	2	...	2,790
.....	553	1,117	557	216	92	111	49	34	58	17	20	6	4	2	3	1	2,840
.....	732	1,183	567	242	108	104	51	40	52	25	20	7	5	1	3	2	3,142
.....	781	1,303	615	247	129	119	49	42	47	30	17	8	2	2	3	2	3,396
.....	838	1,426	668	254	124	120	72	41	58	27	21	7	4	5	2	3	3,670
.....	919	1,468	641	296	129	136	76	50	53	28	21	11	4	5	3	3	3,843
.....	942	1,497	686	311	146	147	64	49	66	35	19	11	7	4	2	3	3,989
.....	1,193	1,554	705	294	151	145	78	42	69	36	26	12	6	6	3	2	4,322
.....	1,692	1,410	693	277	134	136	65	40	57	25	26	10	3	3	4	4	4,579
.....	1,861	1,382	696	299	148	130	76	34	67	33	25	8	7	7	4	1	4,758

METROPOLITAN DISTRICT—*continued.*

TABLE XI.

Yearly Increase and Percentage of Increase of Persons employed in Age-groups—1906–1915.

Under 16 Years of Age.

Year.	Males.					Females.					Total.				
	Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.	
		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	
1906	2,017	224	12·5	.....	.....	1,891	392	26·1	.....	.....	3,908	616	18·7	.....	
1907	2,233	216	10·7	.....	.....	2,082	191	10·1	.....	.....	4,315	407	10·4	.....	
1908	2,138	.....	.....	95	4·3	2,059	.....	.....	23	1·1	4,197	.....	.....	118	
1909	2,104	.....	.....	34	1·6	2,309	250	12·1	.....	.....	4,413	216	5·1	.....	
1910	1,981	.....	.....	123	5·8	2,225	.....	.....	84	3·6	4,206	.....	.....	207	
1911	2,033	52	2·6	.....	.....	2,406	181	8·1	.....	.....	4,439	233	5·5	.....	
1912	1,881	.....	.....	152	7·5	2,406	.....	.....	.....	.....	4,287	.....	.....	152	
1913	1,892	11	·6	.....	.....	2,405	.....	.....	1	·0	4,297	10	·0	.....	
1914	1,874	.....	.....	18	·9	2,304	.....	.....	101	4·1	4,178	.....	.....	119	
1915	2,324	450	24·1	.....	.....	2,549	245	10·6	.....	.....	4,873	695	16·6	.....	

Between 16 and 18 Years of Age.

Year.	Males.					Females.					Total.				
	Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decr	
		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	
1906	4,040	267	7·2	.....	.....	3,704	234	6·7	.....	.....	7,744	501	6·9	.....	
1907	4,122	82	2·0	.....	.....	4,023	319	8·6	.....	.....	8,145	401	5·2	.....	
1908	4,225	103	2·5	.....	.....	4,345	322	8·0	.....	.....	8,570	425	5·2	.....	
1909	4,221	.....	.....	4	·1	4,477	132	3·0	.....	.....	8,698	128	1·5	.....	
1910	4,284	63	1·5	.....	.....	4,645	168	3·7	.....	.....	8,929	231	2·6	.....	
1911	4,277	.....	.....	7	·2	4,694	49	1·1	.....	.....	8,971	42	·5	.....	
1912	4,117	.....	.....	160	3·7	4,430	.....	.....	264	5·6	8,547	.....	.....	424	
1913	3,976	.....	.....	141	3·4	4,442	12	·0	.....	.....	8,418	.....	.....	129	
1914	3,488	.....	.....	488	12·2	4,107	.....	.....	335	7·5	7,595	.....	.....	823	
1915	3,912	424	12·1	.....	.....	4,276	169	4·1	.....	.....	8,188	593	7·8	.....	

Over 18 Years of Age.

Year.	Males.					Females.					Total.				
	Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.		Number employed.	Increase.		Dec	
		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual	
1906	30,143	2,272	8·2	.....	.....	11,996	1,218	11·3	.....	.....	42,139	3,490	9·0	.....	
1907	32,802	2,659	8·8	.....	.....	12,958	962	8·0	.....	.....	45,760	3,621	8·6	.....	
1908	35,306	2,504	7·7	.....	.....	14,321	1,363	10·5	.....	.....	49,627	3,867	8·5	.....	
1909	37,547	2,241	6·3	.....	.....	15,613	1,292	9·0	.....	.....	53,160	3,533	7·1	.....	
1910	41,291	3,744	9·9	.....	.....	16,659	1,046	6·7	.....	.....	57,950	4,790	9·0	.....	
1911	45,775	4,484	10·9	.....	.....	18,320	1,661	10·0	.....	.....	64,095	6,145	10·6	.....	
1912	49,561	3,786	8·3	.....	.....	19,272	952	5·2	.....	.....	68,833	4,738	7·4	.....	
1913	52,023	2,462	4·7	.....	.....	19,467	195	1·0	.....	.....	71,490	2,657	3·8	.....	
1914	49,093	.....	.....	2,930	5·6	18,473	.....	.....	994	5·1	67,566	.....	.....	3,92	
1915	48,655	.....	.....	438	·9	19,613	1,140	6·2	.....	.....	68,268	702	1·3	.....	

All Employees.

Year.	Males.					Females.					Total.				
	Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.		Number employed.	Increase.		D ea	
		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actu	
1906	36,200	2,763	8·3	.....	.....	17,591	1,844	11·7	.....	.....	53,791	4,607	9·4	.....	
1907	39,157	2,957	8·2	.....	.....	19,063	1,472	8·4	.....	.....	58,220	4,429	8·2	.....	
1908	41,669	2,512	6·4	.....	.....	20,725	1,662	8·7	.....	.....	62,394	4,174	7·2	.....	
1909	43,872	2,203	5·3	.....	.....	22,399	1,674	8·1	.....	.....	66,271	3,877	6·2	.....	
1910	47,556	3,684	8·4	.....	.....	23,529	1,130	5·0	.....	.....	71,085	4,814	7·2	.....	
1911	52,085	4,529	9·5	.....	.....	25,420	1,891	8·0	.....	.....	77,505	6,420	9·0	.....	
1912	55,559	3,474	6·7	.....	.....	26,108	688	2·7	.....	.....	81,667	4,162	5·4	.....	
1913	57,891	2,332	4·0	.....	.....	26,314	206	·8	.....	.....	84,205	2,538	3·0	.....	
1914	54,455	.....	.....	3,436	6·2	24,884	.....	.....	1,430	5·4	79,339	.....	.....	4,8	
1915	54,891	436	·8	.....	.....	26,438	1,554	6·2	.....	.....	81,329	1,990	2·5	.....	

METROPOLITAN DISTRICT—*continued.*

Table XII.

Percentages of Persons of each Sex in Age-groups to total Persons employed, 1911–15.

Year.	Under 16 years.				Over 16 and under 18 years.				Over 18 years.				Total.
	Males.		Females.		Males.		Females.		Males.		Females.		
	No.	Per-centage.	No.	Per-centage.	No.	Per-centage.	No.	Per-centage.	No.	Per-centage.	No.	Per-centage	
1911	2,033	2·6	2,406	3·2	4,277	5·5	4,694	6·0	45,775	59·1	18,320	23·6	77,505
1912	1,881	2·3	2,406	3·0	4,117	5·0	4,430	5·4	49,561	60·7	19,272	23·6	81,667
1913	1,892	2·2	2,405	2·9	3,976	4·7	4,442	5·3	52,023	61·8	19,467	23·1	84,205
1914	1,874	2·4	2,304	2·9	3,488	4·4	4,107	5·1	49,093	61·9	18,473	23·3	79,339
1915	2,324	2·9	2,549	3·1	3,912	4·8	4,276	5·3	48,655	59·8	19,613	24·1	81,329

Table XIII.

Number of Persons employed in each Class, 1915.

Class of Factory.	Number of Factories on Register.	Persons Employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		Over 21 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Treating raw materials, product of pastoral pursuits	129	55	4	115	13	143	15	1,895	26	2,208	58	2,266
Oils and fats—animal, vegetable, &c.	22	24	5	39	20	52	52	451	80	566	157	723
Processes in stone, clay, glass, &c.	191	84	...	216	2	382	9	3,499	31	4,181	42	4,223
Working in wood	393	137	...	273	2	412	11	3,005	7	3,827	20	3,847
Metal works, machinery, &c.	549	405	41	932	41	1,158	50	8,216	46	10,711	178	10,889
Connected with food and drink, &c.	849	427	432	573	651	853	973	7,346	1,489	9,199	3,545	12,744
Clothing and textile fabrics, &c.	1,075	361	1,552	495	2,620	596	3,756	4,508	9,068	5,960	16,996	22,956
Books, paper, printing, and engraving, &c.	316	316	327	345	519	356	638	3,082	882	4,099	2,366	6,465
Musical instruments, &c.	16	15	...	18	2	40	5	250	9	323	16	339
Arms and explosives	5	2	...	1	...	3	...	11	...	17	...	17
Vehicles and fittings, saddlery and harness, &c.	292	91	4	216	12	328	17	1,935	42	2,570	75	2,645
Ship and boat building, &c.	34	17	...	105	...	135	...	1,531	4	1,788	4	1,792
Furniture, bedding, &c.	257	126	29	233	49	282	84	2,502	228	3,143	390	3,533
Drugs, chemicals, and by-products	95	61	72	60	143	64	186	601	210	786	611	1,397
Surgical and other scientific instruments	20	5	3	4	2	9	5	55	9	73	19	92
Jewellery and plated-ware, &c.	64	26	3	30	2	53	20	394	24	503	49	552
Heat, light, and power	160	37	...	128	20	162	12	2,915	26	3,242	58	3,300
Leatherware, n.e.i.	27	58	24	40	44	55	37	327	61	480	166	646
Minor wares, n.e.i.	264	77	53	89	134	117	253	932	1,249	1,215	1,688	2,903
Total	4,758	2,324	2,549	3,912	4,276	5,200	6,123	43,455	13,490	54,891	26,438	81,329

Table XIV.

Horse-power of Machinery used in each Class, 1915.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
Treating raw materials, product of pastoral pursuits	66	1,837	1,358	36	869	513	37	873	769
Oils and fats—animal, vegetable, &c.	11	891	624	2	11	10	5	116	97
Processes in stone, clay, glass, &c.	60	7,153	5,036	28	2,119	1,451	56	1,580	1,118
Working in wood	94	4,983	4,506	76	1,051	808	180	5,361	5,436
Metal works, machinery, &c.	51	6,318	5,746	115	2,636	1,957	309	5,379	4,721
Connected with food and drink, &c.	94	10,710	6,667	121	2,112	1,662	341	6,307	4,730
Clothing and textile fabrics, &c.	18	1,711	1,353	62	1,515	1,218	391	2,258	1,895
Books, paper, printing, and engraving, &c.	6	1,237	1,009	56	1,030	801	118	3,774	5,364
Musical instruments, &c.	1	1	1	2	76	76	6	176	173
Arms and explosives	...	...	.....	...	.....	.....	4	31	22
Vehicles and fittings, saddlery and harness, &c.	8	173	141	36	257	188	141	1,055	925
Ship and boat building, &c.	10	2,449	2,192	4	41	35	12	633	464
Furniture, bedding, &c.	5	202	180	17	416	342	144	1,717	1,529
Drugs, chemicals, and by-products	18	502	366	11	436	383	43	1,045	896
Surgical and other scientific instruments	...	...	.....	...	.....	.....	16	29	27
Jewellery and plated-ware, &c.	...	...	.....	3	42	34	51	295	275
Heat, light, and power	21	29,424	26,732	70	2,120	1,806	53	1,117	962
Leatherware, n.e.i.	4	237	140	6	116	107	17	93	79
Minor wares, n.e.i.	18	712	627	32	235	186	59	857	733
Total	485	68,540	56,678	677	15,082	11,577	1,983	32,696	30,215

METROPOLITAN DISTRICT—*continued.*

Table XV.

Classification of Factories according to Number of Persons employed—1915.

Class of Factory.	Number of Factories in which the number of persons employed is—															
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.
I. Treating raw material, product of pastoral pursuits	47	40	25	8	2	4	...	3	5	...	...	...	1	...	...	...
II. Oils and fats—animal, vegetable, &c.	7	5	5	2	...	1	1	...	...	...	...	...	...	1	...	...
III. Processes relating to stone, clay, glass, &c.	46	51	31	24	16	12	3	...	4	...	1	1	1	..	...	...
IV. Working in wood	195	107	53	20	6	2	2	...	4	1	2	...	...	...	...	...
V. Metal works, machinery, &c.	197	161	75	39	14	20	10	6	7	4	7	...	...	...	...	1
VI. Connected with food and drink, &c.	471	190	88	36	18	14	12	3	7	6	5	2	1	3	1	...
VII. Clothing and textile fabrics, &c.	298	345	171	70	42	42	29	14	24	14	6	2	3	2	...	...
VIII. Books, paper, printing, engraving, &c.	104	80	58	24	15	13	6	3	7	4	...	1	1	1	...	...
IX. Musical instruments, &c.	5	5	3	1	...	1	...	...	...	1	...	...	...	...	...	...
X. Arms and explosives	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XI. Vehicles and fittings, saddlery, harness, &c.	114	111	40	15	9	2	2	1	...	...	..	1	...	...	...	...
XII. Ship and boat building, &c.	9	9	4	2	3	2	1	1	1	...	1	...	...	..	1	...
XIII. Furniture, bedding, &c.	82	73	56	25	5	7	...	1	6	...	1	...	...	...	...	...
XIV. Drugs, chemicals, and by-products	24	38	20	4	3	1	2	1	1	...	1	...	...	...	...	...
XV. Surgical and other scientific instruments	12	5	3	...	...	...	...	...	...	...	...	...	...	...	...	...
XVI. Jewellery and plated-ware, &c.	25	22	12	4	...	2	...	...	...	...	...	...	...	...	...	...
XVII. Heat, light, and power	101	29	9	8	3	5	2	...	...	1	1	..	...	...	2	...
XVIII. Leatherware (excepting saddlery and harness)	6	5	7	2	5	...	...	...	1	1	...	...	...	...	..	...
XIX. Minor wares not elsewhere included	114	85	36	15	7	2	6	1	...	1	...	1	...	...	..	...
Total	1,861	1,362	696	299	148	130	76	34	67	33	25	8	7	7	4	1

Table XVI.

Number of Persons employed in each Class—1911–15.

Class of Factory.	1911.	1912.	1913.	1914.
I. Treating raw material, product of pastoral pursuits	2,286	1,945	2,241	1,810
II. Oils and fats—animal, vegetable, &c.	561	666	698	737
III. Processes relating to stone, clay, glass, &c.	4,197	4,177	4,653	4,598
IV. Working in wood	4,155	4,518	4,435	4,214
V. Metal works, machinery, &c.	10,316	11,850	12,275	10,980
VI. Connected with food and drink, &c.	10,707	11,015	12,277	11,667
VII. Clothing and textile fabrics, &c.	22,973	23,530	23,427	22,250
VIII. Books, paper, printing, engraving, &c.	5,986	6,405	6,752	6,156
IX. Musical instruments, &c.	400	422	390	363
X. Arms and explosives	26	33	37	44
XI. Vehicles and fittings, saddlery, harness, &c.	2,748	2,756	2,896	2,679
XII. Ship and boat building, &c.	1,704	2,134	1,904	1,953
XIII. Furniture, bedding, &c.	3,655	3,994	4,080	3,563
XIV. Drugs, chemicals, and by-products	1,329	1,152	1,293	1,236
XV. Surgical and other scientific instruments	113	105	107	109
XVI. Jewellery and plated-ware, &c.	771	782	716	617
XVII. Heat, light, and power	2,508	2,810	2,810	3,504
XVIII. Leatherware (excepting saddlery and harness)	475	484	535	524
XIX. Minor wares not elsewhere included	2,595	2,889	2,679	2,335
Total	77,505	81,667	84,205	79,339

Table XVII.

Increase or decrease in number of Factories and of Persons employed—1905–15.

Year.	Factories.		Persons employed.													
			Under 16 years.				Over 16 years and under 18 years.				* Over 18 years.				Total.	
			Gain.		Loss.		Gain.		Loss.		Gain.		Loss.		Gain.	
	Gain.	Loss.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1905	97	...	159	...	...	73	263	168	...	...	2,127	875	...	...	2,549	970
1906	110	...	224	392	...	...	267	234	...	...	2,272	1,218	...	...	2,763	1,844
1907	50	...	216	191	...	...	82	319	...	...	2,659	962	...	...	2,957	1,472
1908	302	...	...	..	95	23	103	322	...	...	2,504	1,363	...	...	2,512	1,662
1909	254	...	...	250	34	...	..	132	4	...	2,241	1,292	...	...	2,203	1,674
1910	274	...	...	...	123	84	63	168	...	...	3,744	1,046	...	...	3,684	1,130
1911	173	...	52	181	...	...	...	49	7	...	4,484	1,661	...	...	4,529	1,891
1912	146	..	...	..	152	...	..	...	160	264	3,786	952	..	..	3,474	688
1913	333	...	11	..	..	1	...	12	141	...	2,461	195	...	...	2,332	206
1914	257	...	...	...	18	101	...	...	488	335	...	...	2,930	994	...	...
1915	179	...	450	245	...	...	424	169	...	...	...	1,140	438	...	436	1,554

* See foot-note to Table VIII.

METROPOLITAN DISTRICT—*continued.*

TABLE XVIII.

Number of Persons Employed in some of the most important Industries—1911–15.

...ss of Factory.	1911.	1912.	1913.	1914.	1915.	Class of Factory.	1911.	1912.	1913.	1914.	1915.
...down	230	159	252	149	101	Boots and shoes—Factory made	3,695	3,696	3,693	3,564	3,209
...s	867	693	730	743	809	Clothing—Men's slops	3,778	3,523	3,103	3,108	3,158
...ouring and fellmongering	874	839	952	660	1,162	Women's slops	1,592	2,084	2,311	1,999	2,029
...l candles	333	369	372	403	479	Tailoring	3,371	3,437	3,917	3,447	3,720
...nd tiles	2,144	1,977	2,171	2,016	1,490	Dressmaking—					
...ttles	783	783	811	850	1,178	Makers' materials	3,147	2,818	2,573	2,569	2,668
...and earthenware	334	470	427	382	368	Customers' materials	1,244	1,172	1,234	1,099	916
...d packing cases	529	511	614	532	627	Hats and caps	1,478	1,515	1,428	1,454	1,338
...is—Timber	1,510	1,708	1,585	1,759	1,493	Oilskins and waterproofs	67	154	94	65	79
...d copper works	1,487	1,701	1,593	1,358	1,188	Shirts, ties, and scarfs	1,548	1,693	1,609	1,602	1,489
...ring	405	572	487	462	389	Underclothing	1,157	1,027	891	713	838
...ks and foundries	4,020	4,573	4,785	4,467	4,387	Rope and twine	202	269	240	240	268
...						Paper bags and boxes	709	754	661	586	688
...	1,087	1,272	1,279	1,217	1,177	Paper-mills	152	138	241	208	329
... carriage-works	1,068	1,355	1,448	1,097	1,029	Printing, bookbinding, &c.	4,479	4,793	5,152	4,763	4,714
...hing	980	954	914	822	939	Pianos and sewing-machines	400	422	390	363	339
...rks	509	532	535	490	405	Coaches and waggons	1,187	1,171	1,272	1,257	1,190
...serving	1,158	1,018	1,387	1,223	945	Cycles and motor cars	782	872	939	837	925
...	989	950	1,098	993	1,090	Saddlery and harness	586	505	482	425	391
...d pastry	1,417	1,598	1,657	1,637	2,302	Docks and slips	1,278	1,561	1,183	1,289	1,228
...onery	710	747	815	785	960	Ship and boat building	401	542	679	626	510
...ills	258	212	263	247	264	Bedding, flock, and upholstery	748	805	1,009	842	770
... fruit preserving	399	474	523	456	355	Furniture—European	1,080	1,338	1,415	1,215	1,551
...fining	557	547	624	692	586	Chinese	841	862	719	572	431
...watersand cordials	658	696	711	523	667	Chemical works and drugs	894	839	857	845	970
...s	707	761	792	711	790	Electric light and power	246	263	292	298	410
...nts, coffee, and ...es	610	654	711	506	670	Jewellery	634	620	558	478	446
...refrigerating	517	482	653	496	610	Gas-works	1,653	1,734	1,668	2,471	2,033
..., cigars, and cigar... s	1,377	1,418	1,480	1,738	1,823	Laundries—European	1,627	1,888	1,744	1,499	1,981
...-mills	799	841	1,020	1,058	1,130	Chinese	24	29	31	32	22

TABLE XIX.

Number of Factories on Register, and Persons employed in each Trade—1915.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
...—TREATING RAW MATERIAL, ...DUCT OF PASTORAL PURSUITS.												
1. *Animal Products.*												
...down and tallow-refining	8	1	.....	3	.....	9	.....	88	.....	101	.....	101
...	1	...	1	1	.....	...	1	9	7	10	9	19
...s	63	21	.....	39	1	46	1	700	1	806	3	809
...ouring and fellmongering	21	17	3	64	12	77	13	958	18	1,116	46	1,162
...imal products	11	15	.....	5	.....	6	.....	83	.....	109	.....	109
Total, Sub-class 1	104	54	4	112	13	138	15	1,838	26	2,142	58	2,200
2. *Vegetable Products.*												
...tting	25	1	.....	3	.....	5	.....	57	.....	66	.....	66
Total, Class 1	129	55	4	115	13	143	15	1,895	26	2,208	58	2,266
...—OILS AND FATS—ANIMAL AND VEGETABLE.												
...grease	10	5	.....	16	5	11	7	196	4	228	16	244
...ndles, &c.	12	19	5	23	15	41	45	255	76	338	141	479
Total, Class 2	22	24	5	39	20	52	52	451	80	566	157	723
3.—PROCESSES IN STONE, CLAY, GLASS, &c.												
...	5	...	.....	...	.....	...	.....	43	.....	43	.....	43
...nd tiles	62	24	.....	40	.....	56	.....	1,355	15	1,475	15	1,490
...d glass bottles	11	22	.....	104	.....	232	.....	820	.....	1,178	.....	1,178
...rnamental)	19	14	.....	21	1	16	4	174	3	225	8	233
...laster, and cement	1	...	.....	...	.....	4	.....	104	.....	108	.....	108
...and slate	11	2	.....	4	.....	9	.....	155	.....	170	.....	170
...g and fibrous plaster	16	3	.....	10	.....	16	.....	67	....	96	.....	96
...ental masonry	24	...	.....	6	.....	5	1	124	.....	135	1	136
...and earthenware	15	17	.....	23	1	30	4	282	11	352	16	368
...ressing	20	2	.....	6	.....	13	.....	321	.....	342	.....	342
...orks	7	...	.....	2	.....	1	.....	54	2	57	2	59
Total, Class 3	191	84	.....	216	2	382	9	3,499	31	4,181	42	4,223

METROPOLITAN DISTRICT—*continued.*

TABLE XIX—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	T...
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	2	...	.....	...	.....	...	.....	2	.....	2	.....	
Boxes and packing-cases	40	40	.....	45	2	59	9	470	2	614	13	
Cooperage ...	13	11	.....	9	.....	14	.....	208	.....	242	.....	
Joinery	186	35	.....	129	.....	214	2	1,108	5	1,486	7	
Saw-mills—Timber	66	44	.. ...	75	.....	109	.....	960	.....	1,188	.....	
Firewood	58	2	.....	3	.....	7	.....	130	.....	142	.....	
Wood-turning	19	3	.....	10	.....	1	.....	54	.....	68	.....	
Other works	9	2	.....	2	.....	8	.....	73	.....	85	.....	
Total, Class 4 ...	393	137	.....	273	2	412	11	3,005	7	3,827	20	
CLASS 5.—METAL WORKS, MACHINERY, &c.												
Agricultural implements	16	19	... ..	34	.....	30	.....	282	.....	365	.....	
Brass and copper	33	15	1	37	2	52	1	279	2	383	6	
Cutlery	19	3	1	2	.....	8	1	44	1	57	3	
Engineering	180	127	.....	423	1	465	2	3,355	14	4,370	17	
Galvanized iron	32	16	3	26	.....	39	.....	292	.....	373	3	
Iron works, foundries, and boiler-making	82	24	1	78	2	91	1	976	4	1,169	8	
Iron safes and doors	3	2	.....	2	.....	...	.....	15	.....	19	.....	
Lead-mills ...	3	...	.....	...	.....	3	.....	21	.....	24	.....	
Railway carriage works	17	45	.....	89	.....	123	.....	772	.....	1,029	.....	
Smelting and ore dressing	8	3	.....	5	.....	4	.....	250	.....	262	... ..	
Stoves and ovens	13	13	.....	27	.....	27	.....	278	.....	345	.....	
Tin-smithing	19	65	34	78	34	133	40	535	20	811	128	
Wire-working	13	22	1	24	.....	38	1	317	2	401	4	
Other metal works	51	39	.....	73	2	104	4	482	2	698	8	
Plumbers	28	10	.....	27	.. ...	31	.....	229	1	297	1	
Farriers	32	2	.....	7	.....	10	.....	89	.....	108	.....	
Total, Class 5	549	405	41	932	41	1,158	50	8,216	46	10,711	178	
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
1. *Animal Food.*												
Bacon	8	1	.....	1	.....	4	.....	76	1	82	1	
Butchers' small-goods	184	10	.....	5	.....	18	.....	361	1	394	1	
Margarine	3	1	.. ...	3	.....	11	. ....	41	.....	56	.....	
Meat-preserving	10	8	4	23	3	61	35	766	45	858	87	
Total, Sub-class 1	205	20	4	32	3	94	35	1,244	47	1,390	89	
2. *Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.*												
Biscuits	3	127	108	87	144	29	165	220	210	463	627	
Bread and pastry	332	34	11	135	20	169	45	1,804	84	2,142	160	
Confectionery	79	45	98	44	133	55	150	319	116	463	497	
Corn-flour and oatmeal	9	2	10	5	14	3	21	117	37	127	82	
Flour-mills	16	1	3	5	1	19	1	231	3	256	8	
Jam and fruit preserving	12	5	8	10	9	28	15	169	111	212	143	
Pickles, sauces, and vinegar	14	7	8	10	7	7	41	77	78	101	134	
Poultry foods and dog biscuits	2	2	.....	3	.....	2	.....	3	1	10	1	
Self-raising flour	5	...	.....	1	5	1	5	12	10	14	20	
Sugar-refining ...	2	15	7	39	12	35	19	447	12	536	50	
Total, Sub-class 2	474	238	253	339	345	348	462	3,399	662	4,324	1,722	
3. *Drinks and Stimulants.*												
Aerated waters and cordials	43	13	7	49	15	123	32	374	54	559	108	
Breweries	5	...	.....	13	.....	93	.....	684	.....	790	.....	
Condiments, coffee, spices, &c.	25	13	52	9	98	24	101	210	163	256	414	
Distillery	1	...	.....	...	.....	...	.....	39	.....	39	.....	
Ice and refrigerating	40	15	.....	20	.....	20	1	550	4	605	5	
Tea blending and packing	19	51	14	13	24	22	39	95	33	181	110	
Wine, spirits, and beer bottling	23	...	.....	32	5	59	16	172	40	263	61	
Total, Sub class 3	156	92	73	136	142	341	189	2,124	294	2,693	698	
4. *Narcotics.*												
Tobacco, cigars, and cigarettes	14	77	102	66	161	70	287	579	486	792	1,036	
Total, Class 6	849	427	432	573	651	853	973	7,346	1,489	9,199	3,545	

METROPOLITAN DISTRICT—*continued.*

TABLE XIX—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
7.—CLOTHING AND TEXTILE S, AND FIBROUS MATERIALS.												
1. *Textile.*												
n mills	4	47	78	42	164	49	124	328	298	466	664	1,130
2. *Dress.*												
nd shoes :—Order made	114	16	10	18	16	17	21	268	46	319	93	412
Factory made	77	118	170	93	192	132	232	1,569	703	1,912	1,297	3,209
g :—Men's slops	71	41	206	48	378	101	590	552	1,242	742	2,416	3,158
Women's slops	61	16	128	12	209	17	331	125	1,191	170	1,859	2,029
Tailoring	253	22	147	52	309	84	509	851	1,746	1,009	2,711	3,720
	6	...	53	...	74	1	120	5	298	6	545	551
aking and millinery :—												
Makers' material	112	2	299	7	485	11	615	49	1,200	69	2,599	2,668
Customers' material	174	6	101	10	175	15	195	29	385	60	856	916
rks	17	1	4	1	10	8	11	45	49	55	74	129
s	4	1	.....	2	1	1	6	11	27	15	34	49
id caps	37	43	67	47	141	58	248	280	454	428	910	1,338
and knitting	14	4	42	9	75	4	99	34	144	51	360	411
and waterproof clothing	5	1	8	1	13	1	13	10	32	13	66	79
ties, and scarfs	39	8	131	14	186	19	346	77	708	118	1,371	1,489
ilas	6	16	5	5	25	5	17	27	46	53	93	146
lothing	52	4	71	6	118	13	221	27	378	50	788	838
nd hair work	5	...	2	...	2	...	4	9	15	9	23	32
Total, Sub-class 2	1,047	299	1,444	325	2,409	487	3,578	3,968	8,664	5,079	16,095	21,174
brous Materials and Textiles not elsewhere included.												
id sacks	6	1	18	16	36	6	36	43	35	66	125	191
od twine	9	11	4	103	4	40	2	99	5	253	15	268
nd tarpaulins	9	3	8	9	7	14	16	70	66	96	97	193
Total, Sub-class 3	24	15	30	128	47	60	54	212	106	415	237	652
Total, Class 7	1,075	361	1,552	495	2,620	596	3,756	4,508	9,068	5,960	16,996	22,956
8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
king and engraving	7	3	.....	6	1	7	4	33	11	49	16	65
typing and stereotyping, type inding, and printers' materials.	10	8	5	6	7	11	9	49	11	74	32	106
bags and boxes	13	28	98	23	130	16	147	91	155	158	530	688
mills, cardboard, and straw-ard	6	10	9	10	34	14	21	190	41	224	105	329
-engraving, photo.-lithography, d photo. materials	34	15	24	21	52	26	61	200	164	262	301	563
g, bookbinding, and manu-turing stationery	246	252	191	279	295	282	396	2,519	500	3,332	1,382	4,714
Total, Class 8	316	316	327	345	519	356	638	3,032	882	4,099	2,366	6,465
9.—MUSICAL INSTRUMENTS, &C. organs, and sewing-machines	16	15	.....	18	2	40	5	250	9	323	16	359
10.—ARMS AND EXPLOSIVES. ives	5	2	... ..	1	.....	3	.. ...	11	.....	17	.....	17
11.—VEHICLES AND FITTINGS, ADDLERY, HARNESS, &C.												
s and waggons	120	39	.....	87	.....	148	2	909	5	1,183	7	1,190
and motor cars	119	40	1	110	1	120	6	635	12	905	20	925
ulators, &c.	4	3	.. ...	1	.....	7	.....	39	4	50	4	54
ry, harness, &c.	36	8	3	13	11	36	9	290	21	347	44	391
spokes, &c.	8	..	.....	3	.....	14	.....	51	.....	68	.....	68
	5	1	.....	2	.....	3	.....	11	.....	17	.....	17
Total, Class 11	292	91	4	216	12	328	17	1,935	42	2,570	75	2,645
12.—SHIPBUILDING, FITTINGS, &C.												
and slips	4	11	.....	82	.....	70	.....	1,065	.....	1,228	.....	1,228
king	6	1	... .	6	.....	7	.....	36	4	50	4	54
id boat building	24	5	.. ...	17	.....	58	.....	430	.....	510	.....	510
Total, Class 12	34	17	.. ...	105	.....	135	.....	1,531	4	1,788	4	1,792

METROPOLITAN DISTRICT—*continued.*

TABLE XIX.—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	T
CLASS 13.—FURNITURE, BEDDING, &c.												
Bedding, flock, and upholstery	39	32	20	28	33	48	56	406	147	514	256	
Carpet-sewing	3	...	2	2	3	2	2	16	20	20	27	4
Iron bedsteads	6	26	.....	24	.....	6	.....	230	1	316	1	
Billiard tables	3	2	.....	4	.....	4	.....	42	.....	52	.....	
Chair-making	8	5	.....	14	.....	7	.....	117	1	143	1	4
Furniture and cabinet making—												
European	111	50	4	144	7	165	18	1,124	39	1,483	68	
Chinese	56	...	.....	3	.....	4	.....	424	.....	431	.....	
Bamboo and wicker	10	4	.....	5	.....	1	.....	43	.....	53	.....	5
Picture frames	16	7	3	9	6	12	7	65	20	93	36	
Window blinds	5	...	.....	...	.....	3	1	35	.....	38	1	
Total, Class 13	257	126	29	233	49	282	84	2,502	228	3,143	390	53
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c.	16	4	13	1	25	4	39	55	34	64	111	
Chemical works and drugs	52	44	56	49	108	45	137	363	168	501	469	
Fertilisers	8	...	.....	...	.....	1	.....	95	.....	96	.....	
Perfumes and essences	4	3	1	1	5	6	7	14	7	24	20	
Paints and varnishes	15	10	2	9	5	8	3	74	1	101	11	
Total, Class 14	95	61	72	60	143	64	186	601	210	786	611	39
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	17	3	1	4	1	7	4	44	5	58	11	
Surgical instruments	3	2	2	...	1	2	1	11	4	15	8	
Total, Class 15	20	5	3	4	2	9	5	55	9	73	19	
CLASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.												
Electroplating	13	6	.....	10	...	10	2	74	4	100	6	
Jewellery	51	20	3	20	2	43	18	320	20	403	43	4
Total, Class 16	64	26	3	30	2	53	20	394	24	503	49	
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	33	11	.....	69	.....	72	.....	178	.....	330	.....	
Electrical light and power works	*102	5	.....	15	1	21	3	353	12	394	16	4
Gas works	10	5	.....	15	.....	54	.....	1,959	.....	2,033	.....	
Lamps and gas mantles	5	9	.....	6	19	6	9	57	14	78	42	
Hydraulic power	1	...	.....	...	.....	...	.....	28	.....	28	.....	
Coke works	9	7	.....	23	.....	9	.....	340	.....	379	.....	3
Total, Class 17	160	37	.....	128	20	162	12	2,915	26	3,242	58	
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy leather	10	20	4	12	16	10	9	127	14	169	43	
Leather belting	4	7	.....	5	.....	7	.....	48	.....	67	.....	
Portmanteaus	13	31	20	23	28	38	28	152	47	244	123	
Total, Class 18	27	58	24	40	44	55	37	327	61	480	166	
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting	6	1	.....	...	.....	1	.....	28	.....	30	.....	
Brooms, brushes	18	11	2	16	10	12	4	118	12	157	28	
Florists and seedsmen	3	1	3	5	5	2	7	9	54	17	69	
Laundries—European	†158	10	39	22	110	44	231	373	1,152	449	1,532	
Chinese	13	...	.....	1	.....	1	.....	20	.....	22	.....	
Rubber goods	4	1	4	2	3	11	9	59	23	73	39	
Toys	13	5	.....	4	1	1	.....	19	.....	29	1	
Painting and sign-writing	12	3	.....	10	.....	13	.....	104	.....	130	.....	
Other Minor Works	37	45	5	29	5	32	2	202	7	308	19	
Total, Class 19	264	77	53	89	134	117	253	932	1,248	1,215	1,688	2

* These figures include 84 electric lighting plants for picture shows, employing 138 hands.

Charitable institutions doing outside laundry work are now included in the number of factories registered. The persons engaged in laundry wor in these institutions at the end of 1915, are, however, not included in the number of hands employed in laundries.

METROPOLITAN DISTRICT—*continued.*

TABLE XX.

Horse-power of Machinery used in each Trade, 1915.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 1.—TREATING RAW MATERIALS, &c.									
ng-down and tallow refining	4	79	61	2	120	70	4	113	93
	1	8	.....	...	.....	.....	...	...	...
eries	42	698	556	21	645	367	10	63	46
scouring and fellmongering and packing skins	16	919	685	3	28	20	14	560	510
-cutting	3	133	56	10	76	56	9	137	120
Total	66	1,837	1,358	36	869	513	37	873	769
CLASS 2.—OILS AND FATS.									
d grease	5	66	65	2	11	10	2	30	30
and candles	6	825	559	...	.....	.....	3	86	67
Total	11	891	624	2	11	10	5	116	97
LASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.									
alt	1	40	30	...	.....	.....	1	24	24
s and tiles	40	6,425	4,457	12	1,756	1,161	9	616	296
and glass bottles	2	34	28	1	9	4	6	122	117
(ornamental)	1	10	1	1	10	.....	10	100	89
le and slate	1	20	15	3	82	62	6	104	101
lling and fibrous plaster	...	.....	.....	1	5	5	8	40	35
mental masons	...	.....	.....	2	36	24	2	28	26
ry and earthenware	6	401	303	4	53	40	3	105	85
-dressing	8	211	192	4	168	155	9	373	287
works	1	12	10	...	...	.....	2	68	58
Total	60	7,153	5,036	28	2,119	1,451	56	1,580	1,118
CLASS 4.—WORKING IN WOOD.									
ators	2	13	13	...	.....	.....	...	.....	.....
and packing-cases	3	471	396	5	92	80	33	1,013	818
rage	5	138	133	2	86	66	2	16	16
ry	9	1,088	1,034	52	656	483	103	687	2,003
nills—timber	39	2,794	2,545	3	90	77	20	3,452	2,456
firewood	34	384	300	8	87	71	5	33	33
-turning	1	20	10	3	14	11	14	132	88
works	1	75	75	3	26	20	3	28	22
Total	94	4,983	4,506	76	1,051	808	189	5,361	5,436
CLASS 5.—METAL WORKS, MACHINERY, &c.									
ultural implements	...	.....	.....	5	74	55	5	56	54
and copper	2	254	88	8	130	98	21	132	112
ry	...	.....	.....	1	8	8	16	110	82
eering	24	2,499	2,283	48	924	806	121	2,472	2,241
nized iron	2	16	14	5	63	55	15	148	39
works, foundries, and boiler-making	11	415	349	22	438	317	41	765	676
afes and doors	...	.....	.....	...	.....	.....	2	9	8
mills	1	108	96	2	11	8	1	40	30
ay carriage works	3	378	291	2	232	114	7	64	71
ing and ore-dressing	2	2,512	2,506	...	.....	.....	4	384	378
s and ovens	...	.....	.....	6	160	125	5	104	94
ithing	1	8	8	6	108	71	5	89	55
-working	...	.....	.....	1	40	36	12	543	500
metal works	1	120	105	6	440	256	37	424	343
bers	3	.....	.....	2	4	4	3	14	14
rs	1	8	6	1	4	4	14	25	24
Total	51	6,318	5,746	115	2,636	1,957	309	5,379	4,721
ASS 6.—CONNECTED WITH FOOD AND DRINK, &c.									
	4	186	169	...	.....	.....	6	82	63
ers' small-goods	13	313	244	47	315	252	110	594	553
arine	3	50	18	1	52	30	2	71	28
preserving	8	911	338	1	31	26	6	173	100
its	2	585	365	..	.....	.....	2	97	67
and pastry	3	17	6	29	282	210	66	624	509
ctionery	4	67	58	5	99	96	31	298	163
flour and oatmeal	2	85	80	3	33	26	5	238	231
-mills	8	1,865	1,480	2	208	150	4	78	61
nd fruit preserving	5	60	56	...	.....	.....	6	131	115
es, sauces, and vinegar	5	37	23	...	.....	.....	4	22	16
iscuits and poultry foods	1	4	4	...	.....	.....	3	19	19
ising flour	...	...	.....	1	3	3	4	31	29
	1	496	327	...	.....	.....	1	1,250	915
ed waters	12	55	38	11	73	53	20	311	257
eries	3	2,613	1,339	2	17	9	3	415	207
ments, Eastern goods, &c.	3	345	403	3	42	34	18	291	222
lery	...	.....	.....	...	.....	.....	...	.....	.....
d refrigerating	14	2,958	1,671	13	890	718	18	537	415
lending	1	50	40	1	12	12	16	130	102
co, cigars, and cigarettes	2	13	8	2	55	43	6	145	115
s and spirits	...	.....	.....	...	.....	.....	10	770	543
Total	94	10,710	6,667	121	2,112	1,662	341	6,307	4,730

METROPOLITAN DISTRICT—*continued.*

TABLE XX—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actual used
CLASS 7.—CLOTHING AND TEXTILE FABRICS, &c.									
Woollen mills	4	786	675	2	220	186	1	150	15
Boots and shoes	1	100	50	38	728	535	116	688	57
Clothing—men's slops	...	... ..	.....	1	10	8	53	190	17
,, women's slops	...	.....	.....	1	3	3	36	116	10
,, tailoring	1	8	8	1	120	110	43	76	6
Corsets	...	.....	.....	...	.....	.....	4	20	1
Dressmaking	...	.....	.....	...	.....	.....	23	97	9
Dye works	5	29	17	2	9	8	8	7	
Furriers	...	.....	.....	1	1	1	1	5	
Hats and caps	6	568	383	5	32	28	28	303	2
Hosiery, knitting, &c.	...	.....	.....	1	24	6	10	62	
Oilskins and waterproof clothing	...	.....	.....	...	.....	.....	5	26	
Shirts, ties, and scarfs	...	.....	.....	4	51	46	25	173	1
Umbrellas	...	.....	.....	...	.....	.....	5	15	
Underclothing	...	.....	.....	...	.....	.....	21	66	
Bags and sacks	...	.....	.....	...	.....	.....	2	76	
Rope and twine	1	220	220	5	307	279	2	162	
Tents and tarpaulins	...	.....	.....	1	10	8	8	26	
Total	18	1,711	1,353	62	1,515	1,218	391	2,258	1,8
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.									
Die-sinking and engraving	...	.....	.....	...	.....	.....	5	31	
Electro- and stereo-typing, printers' materials, &c.	...	.....	.....	2	5	5	6	117	
Paper bags and boxes	2	123	87	4	64	54	7	118	1
Paper-mills	2	1,105	915	1	2	2	1	30	
Photo-engraving, photo materials, &c.	...	.....	.....	...	.....	.....	12	143	1
Printing, bookbinding, and stationery	2	9	7	49	959	740	87	3,335	2,6
Total	6	1,237	1,009	56	1,030	801	118	3,774	3,4
CLASS 9.—MUSICAL INSTRUMENTS, &c.									
Pianos and sewing-machines	1	1	1	2	76	76	6	176	1
CLASS 10.—ARMS AND EXPLOSIVES.									
Explosives	...	.....	.....	...	.....	.....	4	31	2
CLASS 11.—VEHICLES, SADDLERY, HARNESS, &c.									
Coaches and waggons	2	18	14	11	100	85	39	499	9
Cycles and motor-cars	...	.....	.....	23	146	92	79	351	2
Perambulators	...	.....	.....	1	3	3	2	8	
Saddlery and harness	...	.....	.....	...	.....	.....	14	63	6
Naves and spokes	6	155	127	1	8	8	6	128	4
Whips	...	.....	.....	...	.....	.....	1	6	6
Total	8	173	141	36	257	188	141	1,055	2
CLASS 12.—SHIPBUILDING, &c.									
Docks and slips	4	2,012	2,012	...	.....	.....	1	200	10
Sailmaking	...	.....	.....	...	.....	.....	1	4	4
Ship and boat building	6	437	180	4	41	35	10	429	30
Total	10	2,449	2,192	4	41	35	12	633	54
CLASS 13.—FURNITURE, BEDDING, &c.									
Bedding and flock	3	93	76	3	59	66	22	387	48
Carpet-sewing	...	.....	.....	1	10	8	1	1	1
Iron bedsteads	...	.....	.....	...	.....	.....	4	206	54
Billiard-tables	...	.....	.....	2	23	23	2	26	1
Chair-making	..	.....	.....	...	.....	.....	7	55	4
Furniture—European	2	104	104	11	324	245	73	802	43
,, Chinese	...	.....	.....	...	.....	.....	18	168	3
,, Bamboo and Wicker	...	.. ...	.....	...	.....	.....	1	17	1
Picture frames	...	.....	.....	...	.....	.....	14	38	3
Window blinds	...	.....	.....	...	.....	.....	2	17	1
Total	5	202	180	17	416	342	144	1,717	2
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.									
Blue, baking-powder, soda, &c.	1	12	12	2	150	126	10	235	21
Chemical works and drugs	9	280	192	4	173	149	21	691	96
Fertilisers	6	138	125	...	.....	.....	3	67	6
Perfumes and essences	...	.....	.....	...	.....	.....	2	14	1
Paints and varnish	2	72	37	5	113	108	7	38	3
Total	18	502	366	11	436	383	43	1,045	59
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.									
Optical instruments	...	.....	.....	...	.....	.. ...	14	24	2
Surgical instruments	...	.....	.....	...	.....	.....	2	5	
Total	...	.....	.....	...	.....	.....	16	29	2

METROPOLITAN DISTRICT—*continued.*

TABLE XX—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
ASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.									
ctro-plating	...	.....	.....	3	42	34	12	128	113
ellery	...	.....	.....	...	.....	.....	39	167	162
Total	...	.....	.....	3	42	34	51	295	275
CLASS 17.—LIGHT, HEAT, AND POWER.									
ctrical apparatus	...	.....	.....	...	.....	.....	24	162	148
ctric light	7	27,220	25,075	64	1,850	1,591	20	792	687
s	6	1,024	739	5	260	209	1	43	22
nps and gas mantles	...	.....	.....	1	10	6	4	28	25
draulic power	...	.....	.....	...	.....	.....	1	5	5
c works	8	1,180	918	...	.....	.....	3	87	75
Total	21	29,424	26,732	70	2,120	1,806	53	1,117	962
CLASS 18.—LEATHERWARE (EXCEPTING SADDLERY AND HARNESS).									
cy leather	3	137	90	3	95	87	5	32	32
ther belting	1	100	50	1	14	14	2	15	15
tmanteaux and bags	...	.....	.....	2	7	6	10	46	32
Total	4	237	140	6	116	107	17	93	79
LASS 19.—MINOR WARES (NOT ELSEWHERE INCLUDED).									
oms and brushes	...	.....	.....	4	37	26	11	26	23
rists and seedsmen	...	.....	.....	1	11	8	2	19	12
ndries	18	712	627	24	166	139	24	580	524
bber goods	...	.....	.....	...	.....	.....	4	168	113
rs	...	.....	.....	3	21	13	6	19	19
nting and signwriting	...	.....	.....	...	.....	.....	2	3	3
er minor works	...	.....	.....	...	.....	.....	10	42	39
Total	18	712	627	32	235	186	59	857	733

NOTE.—These figures include 2 steam plants using 47 h.-p., 64 gas plants using 856 h.-p., and 18 electric and oil plants using 153 h.-p., for lighting purposes at Picture Shows.

NEWCASTLE DISTRICT RETURNS.

NOTE.—This District was proclaimed on 6th February, 1899, and was extended on 1st August, 1904.

TABLE XXI.

Classification of Persons Employed, 1906–15.

Year.	Number of Factories on Register.	Persons employed.								
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
06	483	256	236	426	360	3,090	675	3,772	1,271	5,043
07	495	249	284	435	441	3,337	726	4,021	1,451	5,472
08	507	256	222	427	436	3,306	693	3,989	1,351	5,340
09	498	205	100	377	310	3,125	656	3,707	1,066	4,773
10	524	263	98	430	265	3,258	748	3,951	1,111	5,062
11	569	274	117	446	278	3,570	782	4,290	1,177	5,467
12	589	239	145	411	303	3,784	1,290	4,434	1,290	5,724
13	572	234	163	415	280	3,988	903	4,637	1,346	5,983
14	583	158	123	388	237	3,802	769	4,348	1,129	5,477
15	579	193	140	385	278	4,559	767	5,137	1,185	6,322

TABLE XXII.

Horse-power of Machinery used, 1906–15.

Year.	Steam.		Gas.		Electricity and other.		Total.	
	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	*No. of Factories.	Horse-power.
06	140	3,102	31	205	10	843	181	4,150
07	143	3,184	33	372	16	1,200	192	4,756
08	152	3,413	37	219	24	1,703	213	5,335
09	156	3,458	42	224	33	1,717	231	5,399
10	154	4,275	47	304	56	2,325	257	6,904
11	167	4,424	59	377	90	2,489	316	7,290
12	176	4,420	66	451	109	1,792	351	6,663
13	166	4,553	66	474	119	1,824	351	6,851
14	145	4,700	76	541	132	3,313	353	8,554
15	150	5,957	69	1,477	131	1,654	350	9,088

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using power.

NEWCASTLE DISTRICT—*continued.*

TABLE XXIII.

Classification of Factories according to Number of Persons employed, 1906–1915.

Year.	Number of Factories in which the number of persons employed is—														Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and over.	
1906	183	202	56	22	9	5	...	1	2	1	...	...	1	1	483
1907	165	213	70	19	13	6	1	3	3	...	...	...	...	2	495
1908	169	224	64	22	9	11	2	...	3	1	..	1	1	...	507
1909	219	179	51	23	10	8	1	1	4	...	...	2	...	...	498
1910	228	191	60	17	9	8	4	...	3	2	...	2	...	...	524
1911	252	197	66	27	5	12	2	2	3	1	...	2	...	...	569
1912	270	203	53	29	13	12	1	1	1	3	1	2	...	...	589
1913	234	217	61	20	16	10	7	1	...	3	2	...	1	...	572
1914	290	172	57	26	13	12	5	3	...	3	2	...	...	..	583
1915	305	156	62	18	12	12	5	1	3	1	2	...	1	1	579

TABLE XXIV.

Number of Persons Employed in each Class, 1915.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		16 years and under 18 years.		18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Tot
I. Treating raw materials, &c.	11	...	...	1	...	1	...	14	...	16	...	
II. Oils and fats, animal and vegetable, &c.	4	10	2	8	8	10	11	124	4	152	25	
III. Processes in stone, clay, and glass, &c.	31	5	...	21	...	23	...	272	...	321	...	
IV. Working in wood	68	16	...	35	...	55	...	443	1	549	1	
V. Metal works, machinery, &c.	55	71	...	143	...	148	...	1,823	...	2,185	...	2,
VI. Connected with food and drink, &c.	191	34	22	83	48	88	37	594	57	799	164	
VII. Clothing and textile fabrics, &c.	85	8	108	17	164	20	229	199	325	244	826	1,
VIII. Books, paper, printing, &c.	24	21	3	12	19	28	12	131	25	192	59	
IX. Musical instruments	...	...	...	...	...	...	...	...	...	...	...	
X. Arms and explosives	1	...	...	...	...	1	1	5	4	6	5	
XI. Vehicles and fittings, saddlery and harness	41	8	...	28	...	29	...	172	2	237	2	
XII. Ship and boat building, &c.	5	...	...	3	...	4	...	33	...	40	...	
XIII. Furniture, bedding, &c.	15	8	...	18	...	19	...	101	3	146	3	
XIV. Drugs, chemicals, and by-products	1	...	...	...	...	2	...	7	...	9	...	
XV. Surgical and other scientific instruments	1	...	...	1	...	...	...	...	...	1	...	
XVI. Jewellery and plated-ware, &c.	4	2	...	2	...	1	...	12	...	17	...	
XVII. Heat, light and power	32	5	...	6	...	6	...	163	...	180	...	
XVIII. Leatherware, n.e.i.	...	...	...	...	...	...	...	...	...	...	...	
XIX. Minor wares, n.e.i.	10	5	5	7	39	5	28	26	28	43	100	
Total	579	193	140	385	278	440	318	4,119	449	5,137	1,185	6

TABLE XXV.

Horse-power of Machinery used in each Class, 1915.

Class of Factory.	Steam.		Gas.		Electricity.		Other.	
	No. of Factories.	Horse-power actually used.	No. of Factories.	Horse-power actually used.	No. of Factories.	Horse-power actually used.	No. of Factories.	Horse-po actually
I. Treating raw materials, product of pastoral pursuits	3	10	2	20	4	39	3	
II. Oils and fats—animal, vegetable, &c.	4	296	...	.....	...	.....	...	....
III. Processes in stone, clay, glass, &c.	18	521	2	14	3	75	4	
IV. Working in wood	48	1,079	6	40	8	180	6	
V. Metal works, machinery, &c.	9	791	11	1,014	15	638	1	
VI. Connected with food and drink, &c.	42	649	23	126	19	194	19	
VII. Clothing and textile fabrics, &c.	...	.....	...	.....	12	30	...	....
VIII. Books, paper, printing and engraving, &c.	1	5	9	79	3	11	3	
IX. Musical instruments, &c.	...	.....	...	.....	...	.....	...	....
X. Arms and explosives	1	10	...	.....	...	.....	...	....
XI. Vehicles and fittings, saddlery and harness, &c.	5	44	3	60	5	15	2	
XII. Ship and boat building, &c.	3	63	1	2	...	.....	...	...
XIII. Furniture, bedding, &c.	1	4	5	29	5	40	...	...
XIV. Drugs, chemicals, and by-products	...	.. ...	...	.....	1	18	...	...
XV. Surgical and other scientific instruments	...	.....	1	1	...	.....	...	...
XVI. Jewellery and plated-ware, &c.	...	.....	...	.....	2	5	...	..
XVII. Heat, light and power	12	2,453	6	92	8	212	7	
XVIII. Leatherware, n.e.i.	...	.....	...	.....	...	.....	...	..
XIX. Minor wares, n.e.i.	3	32	...	.....	1	6	...	...
Total	150	5,957	69	1,477	86	1,463	45	

NEWCASTLE DISTRICT—*continued.*

TABLE XXVI.

Classification of Factories according to Number of Persons employed, 1915.

Class of Factory.	Number of Factories in which the number of persons employed is—														Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and over.	
I. Treating raw material, product of pastoral pursuits	10	...	...	...	1	...	...	...	...	...	...	...	...	...	11
I. Oils and fats—animal, vegetable, &c.	1	2	...	...	...	...	...	...	...	1	...	...	...	...	4
I. Processes relating to stone, clay, glass, &c.	13	5	6	5	2	...	...	...	...	...	...	...	...	...	31
V. Working in wood	25	31	7	1	1	2	1	...	...	...	...	...	...	...	68
V. Metal work, machinery, &c.	24	15	8	1	1	1	...	...	1	...	2	...	1	1	55
I. Connected with food and drink, &c.	136	35	13	3	1	1	1	...	1	...	...	...	...	...	191
I. Clothing and textile fabrics, &c.	28	32	13	1	1	6	2	1	1	...	...	...	...	...	85
I. Books, paper, printing, engraving, &c.	10	8	1	2	2	1	...	...	...	...	...	...	...	...	24
X. Musical instruments, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
X. Arms and explosives	...	...	1	...	...	...	...	...	...	..	...	...	...	...	1
I. Vehicles and fittings, saddlery, harness, &c.	18	15	7	1	...	...	...	...	...	...	...	...	...	...	41
I. Ship and boat building, &c.	2	1	1	1	...	...	...	...	...	...	...	...	...	...	5
I. Furniture, bedding, &c.	7	4	1	1	1	1	...	...	...	...	...	...	...	...	15
V. Drugs, chemicals, and by-products	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
V. Surgical and other scientific instruments	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
I. Jewellery and plated-ware, &c.	2	2	...	...	...	...	...	...	...	...	...	...	...	...	4
I. Heat, light and power	23	4	2	2	1	...	...	...	...	...	...	...	...	...	32
I. Leatherware (excepting saddlery and harness)	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...
X. Minor wares, n.e.i.	5	1	2	...	1	...	1	...	...	...	...	...	...	...	10
Total	305	156	62	18	12	12	5	1	3	1	2	...	1	1	579

TABLE XXVII.

Number of Persons employed in each Class, 1911–15.

Class of Factory.	1911.	1912.	1913.	1914.	1915.
I. Treating raw material, product of pastoral pursuits	24	23	19	15	16
I. Oils and fats—animal, vegetable, &c.	241	262	238	241	177
I. Processes relating to stone, clay, glass, &c.	272	341	441	337	321
V. Working in wood	617	573	630	659	550
V. Metal works, machinery, &c.	1,155	1,310	1,361	1,204	2,185
I. Connected with food and drink, &c.	1,157	1,070	1,074	926	963
I. Clothing and textile fabrics, &c.	1,061	1,128	1,218	1,088	1,070
I. Books, paper, printing, engraving, &c.	212	209	227	273	251
X. Musical instruments, &c.	.....	.....	.....	.....	.....
X. Arms and explosives	6	6	4	7	11
I. Vehicles and fittings, saddlery, harness, &c.	246	270	258	230	239
I. Ship and boat building, &c.	79	65	47	49	40
I. Furniture, bedding, &c.	95	119	137	134	149
V. Drugs, chemicals, and by-products	.....	48	32	5	9
V. Surgical and other scientific instruments	.....	2	2	2	1
I. Jewellery and plated-ware, &c.	19	17	17	19	17
I. Heat, light and power	218	194	188	200	180
I. Leatherware (excepting saddlery and harness)	.....	.....	.....	.....	.....
X. Minor wares, n.e.i.	65	87	90	88	143
Total	5,467	5,724	5,983	5,477	6,322

TABLE XXVIII.

Number of Persons employed in some of the most important Industries, 1911–15

Class of Factory.	1911.	1912.	1913.	1914.	1915.	Class of Factory.	1911.	1912.	1913.	1914.	1915.
and candles	241	175	178	161	175	Breweries	88	87	102	75	84
and tiles	165	194	291	210	205	Wine making	81	81	95	91	113
y and earthenware	27	70	77	70	63	Tailoring	642	505	538	465	473
y	196	214	227	207	219	Dressmaking, Makers' materials	266	296	278	259	252
ills, timber	320	272	336	332	279	,, Customers' ,,	112	94	127	69	46
eering and bolts and nuts	641	662	737	661	747	Printing, bookbinding, &c.	212	185	197	221	222
orks and foundries	52	66	59	50	762	Coaches and waggons	113	127	121	106	114
ing	333	396	421	311	512	Saddlery and harness	64	65	59	59	52
ts	351	338	273	94	114	Ship and boat building	79	65	35	37	27
and pastry	297	247	274	272	284	Furniture—European	73	96	110	112	116
tionery	48	46	47	48	42	Gasworks	136	88	87	96	92
ining	96	87	60	80	2	Clothing—Men's slops	90	151	203	207	230
ed waters	121	106	103	96	121	Shirts	28	38	35	30	32

BROKEN HILL DISTRICT RETURNS.

NOTE.—This District was proclaimed on 1st March, 1903.

TABLE XXIX.

Classification of Persons Employed, 1915.

Class of Factory.	Number of Factories on Register.	Persons employed.									
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
I. Treating raw materials, product of pastoral pursuits	1	...	.....	...	.....	...	.....	1	...	1	...
II. Oils and fats—animal, vegetable, &c.	1	...	.....	..	.....	...	.....	2	...	2	...
III. Processes in stone, clay, glass, &c.	3	...	.....	...	.....	1	.....	10	...	11	...
IV. Working in wood	20	1	.....	5	.....	6	.....	59	...	71	...
V. Metal works, machinery, &c.	10	3	.. ...	7	.....	10	.....	176	...	196	...
VI. Connected with food and drink, &c.	68	15	.....	27	4	12	3	145	6	199	13
VII. Clothing and textile fabrics, &c. ..	24	4	7	...	26	6	37	14	52	24	122
VIII. Books, paper, printing and engraving, &c.	7	5	.....	14	2	9	2	40	3	68	7
XI. Vehicles and fittings, saddlery and harness, &c.	8	3	.....	5	.....	5	.....	26	...	39	...
XIII. Furniture, bedding, &c.	2	...	.....	...	.....	...	.....	2	...	2	...
XIV. Drugs, Chemicals, &c.	1	...	.....	1	.....	3	.....	2	...	6	...
XVII. Heat, light and power	3	1	.....	...	.....	...	.....	37	...	38	...
XIX. Minor wares, n.e.i.	8	1	.....	...	.....	1	.....	12	1	14	1
Total	156	33	7	59	32	53	42	526	62	671	143

TABLE XXX.

Horse-power of Machinery used, 1915.

Class of Factory.	Steam.			Gas.			Electricity, &c	
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.
I. Treating raw materials, product of pastoral pursuits	1	18	5	...	.....	.....	...	.....
II. Oils and fats—animal, vegetable, &c.	...	.....	.....	...	.....	.....	...	.....
III. Processes in stone, clay, glass, &c.	1	50	.....	...	.....	.....	...	.....
IV. Working in wood	1	160	130	2	10	9	15	101
V. Metal works, machinery, &c.	1	16	16	1	15	15	7	95
VI. Connected with food and drink, &c.	2	44	32	17	291	264	14	37
VII. Clothing and textile fabrics, &c.	...	.....	.....	...	.....	.....	...	.....
VIII. Books, paper, printing, engraving, &c.	2	20	18	3	20	16	4	17
XI. Vehicles and fittings, saddlery and harness, &c.	...	.....	.....	1	7	6	2	7
XIII. Furniture, bedding, &c.	...	.....	.....	...	.....	.....	...	.....
XVII. Heat, light and power	3	393	314	1	5	4	1	200
XIX. Minor wares, n.e.i.	...	.....	.....	...	.....	.....	...	.....
Total	11	701	515	25	348	314	43	457

TABLE XXXI.

Classification of Factories according to Number of Persons employed, 1915.

Class of Factory.	Number of Factories in which the number of persons employed is—												
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.
I. Treating raw material, product of pastoral pursuits	1	...	...	...	...	...	...	...	...	...	...	...	...
II. Oils and fats—animal, vegetable, &c.	1	...	...	...	...	...	...	...	...	...	...	...	...
III. Processes relating to stone, clay, glass, &c.	1	2	...	...	...	...	...	...	...	...	...	...	...
IV. Working in wood	16	3	...	...	1	...	...	...	...	...	...	...	...
V. Metal works, machinery, &c.	4	4	..	..	...	1	...	...	1	...	...	...	...
VI. Connected with food and drink, &c.	51	12	3	2	...	...	...	...	...	...	...	...	...
VII. Clothing and textile fabrics, &c.	7	13	3	1	...	...	...	...	...	...	...	...	...
VIII. Books, paper, printing, engraving, &c.	1	4	1	...	1	...	...	...	...	...	...	...	...
XI. Vehicles and fittings, saddlery, harness, &c.	4	2	2	...	...	...	...	...	...	...	...	...	...
XIII. Furniture, bedding, &c.	2	...	...	...	...	...	...	...	...	...	...	...	...
XIV. Drugs, Chemicals, &c.	...	1	...	..	...	...	...	...	...	...	...	...	...
XVII. Heat, light and power	...	...	3	...	...	...	...	..	...	...	...	...	...
XIX. Minor wares, n.e.i.	7	1	...	..	...	...	...	...	...	...	...	...	...
Total	95	42	12	3	2	1	...	...	1	...	...	...	...

WESTERN DISTRICT RETURNS.

—This District was proclaimed on 1st August, 1904, and was known as the Hartley District. Extended on 3rd October, 1911, and called "Western."

Table XXXII.

Classification of Persons Employed, 1915.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		16 years and under 18 years.		18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Treating raw materials, &c. ...	11	...	.....	...	.. ...	2	.....	43	.....	45	.....	45
Oils and fats—animal and vegetable, &c.	4	1	.....	...	.....	...	.....	4	.....	5	.....	5
Processes in stone, clay, glass, &c.	24	6	.....	13	.....	32	.....	991	.....	1,042	.....	1,042
Working in wood	40	3	.....	5	.....	14	.....	121	.....	143	.....	143
Metal works, machinery, &c....	26	14	.....	36	.....	30	.....	690	.....	770	.....	770
Connected with food and drink, &c.	118	5	.....	44	.....	30	3	380	3	459	6	465
Clothing and textile fabrics, &c.	49	4	22	3	37	8	74	86	135	101	268	369
Books, paper, printing, &c. ...	19	6	.....	12	2	29	1	66	1	113	4	117
Vehicles and fittings, saddlery and harness.....	45	5	.....	26	.....	41	.....	128	.....	200	.....	200
Furniture, &c.	1	...	.....	...	.....	2	.....	4	1	6	1	7
Heat, light and power	21	5	.....	1	.....	7	.....	134	3	147	3	150
Minor wares n.e.i. (laundry)...	4	...	.....	1	4	...	9	4	16	5	29	34
Total.....	362	49	22	141	43	195	87	2,651	159	3,036	311	3,347

Table XXXIII.

Horse-power of Machinery used, 1915.

Class of Factory	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
Treating raw materials, product of pastoral pursuits	5	74	47	4	51	25	1	6	2
Oils and fats—animal, vegetable, &c.	2	20	10	...	.....	.....	...	... ..	.....
Processes in stone, clay, glass, &c.....	9	3,798	2,875	...	.....	.....	10	1,495	1,096
Working in wood	11	163	122	14	126	110	5	44	34
Metal works machinery, &c.	6	4,954	4,932	6	58	41	3	12	11
Connected with food and drink, &c.	24	850	634	29	660	492	16	63	59
Clothing and textile fabrics, &c.....	...	.....	.....	...	.....	.....	3	15	12
Books, paper, printing and engraving, &c.	...	.....	.....	11	59	45	4	11	10
Vehicles and fittings, saddlery and harness, &c. ...	2	11	7	4	35	27	3	14	10
Heat, light and power	8	684	153	6	121	96	4	41	30
Minor wares n.e.i. (laundry)	3	28	20	1	5	3	...	.....	.....
Total.....	70	10,582	8,800	75	1,115	839	49	1,701	1,264

Table XXXIV.

Classification of Factories according to Number of Persons employed, 1915.

Class of Factory.	Number of Factories in which the number of persons employed is—														Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and over.	
Treating raw material, product of pastoral pursuits ..	6	3	2	...	...	...	...	...	...	...	...	...	...	...	11
Oils and fats—animal, vegetable, &c.....	4	...	...	...	...	...	...	...	...	...	...	...	...	...	4
Processes relating to stone, clay, glass, &c.	9	5	1	2	1	3	1	1	...	...	...	...	...	1	24
Working in wood	27	11	1	1	...	...	...	...	...	...	...	...	...	...	40
Metal works, machinery, &c.	15	7	1	1	...	...	...	...	...	...	1	...	1	...	26
Connected with food and drink, &c.	86	23	8	1	...	...	...	...	...	...	...	...	...	...	118
Clothing and textile fabrics, &c.....	16	25	5	1	1	1	...	...	...	...	...	...	...	...	49
Books, paper, printing, engraving, &c.	9	5	5	...	...	...	...	...	...	...	...	...	...	...	19
Vehicles and fittings, saddlery, harness, &c.	23	18	4	...	...	...	...	...	...	...	...	...	...	...	45
Furniture, &c.	...	1	...	...	..	...	...	...	...	...	...	...	...	...	1
Heat, light and power	12	3	4	2	...	...	...	...	...	...	...	...	...	...	21
Minor wares n.e.i. (laundry)	1	1	2	...	...	...	...	...	...	...	...	...	...	...	4
Total.....	208	102	33	8	2	4	1	1	...	...	1	...	1	1	362

GOULBURN DISTRICT RETURNS.

NOTE.—This District was proclaimed on 1st May, 1907. Extended on 3rd October, 1911.

TABLE XXXV.

Classification of Persons employed, 1915.

Class of Factory.	Number of Factories on Register.	Persons employed.									
		Under 16 years.		16 years and under 18 years.		18 years and over.		Over 21 years.		Total.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
I. Treating raw materials, &c.	2	...	...	...	...	...	...	12	...	12	...
III. Processes in stone, clay, glass, &c.	18	3	...	3	...	7	...	131	...	144	...
IV. Working in wood	17	...	...	...	...	7	...	53	...	60	...
V. Metal works, machinery, &c.	4	...	...	2	...	3	...	21	..	26	...
VI. Connected with food and drink, &c.	97	4	...	11	2	14	...	147	1	176	3
VII. Clothing and textile fabrics, &c.	28	3	3	8	13	9	25	86	46	105	86
VIII. Books, paper, printing, &c.	8	2	3	4	1	2	...	32	2	41	7
XI. Vehicles and fittings, saddlery and harness	17	6	...	2	...	9	...	60	...	77	...
XIII. Furniture, bedding, &c.	1	...	...	1	...	1	...	2	...	4	...
XIV. Drugs, chemicals, &c.	1	...	...	...	...	...	...	3	...	3	...
XVII. Heat, light and power	11	...	...	...	...	1	...	21	...	22	...
XIX. Minor wares n.e.i. (laundry)	1	...	...	...	...	1	4	3	2	4	6
Total	205	18	6	31	16	54	29	571	51	674	102

TABLE XXXVI.

Horse-power of Machinery used, 1915.

Class of Factory.	Steam.			Gas.			Electricity.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal	
I. Treating raw materials, product of pastoral pursuits	2	33	26	...	.....	.....	..	.....	
III. Processes in stone, clay, glass, &c.	6	134	116	...	.....	.....	3	16	
IV. Working in wood	9	101	78	3	36	23	4	46	
V. Metal works, machinery, &c.	...	.....	.....	1	12	12	1	3	
VI. Connected with food and drink, &c.	11	211	106	9	232	196	9	39	
VII. Clothing and textile fabrics, &c.	...	.....	.....	2	75	39	1	3	
VIII. Books, paper, printing and engraving, &c.	...	.....	.....	3	14	13	3	5	
XI. Vehicles and fittings, saddlery and harness, &c.	...	.....	.....	4	45	31	3	15	
XVII. Heat, light and power	3	198	152	4	313	278	6	114	
XIX. Minor wares n.e.i. (laundry)	1	4	3	...	.....	.....	...	.....	
Total	32	681	481	26	727	592	30	241	

TABLE XXXVII.

Classification of Factories according to Number of Persons employed, 1915.

Class of Factory.	Number of Factories in which the number of persons employed is—												
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.
I. Treating raw material, product of pastoral pursuits	1	...	1	...	...	...	...	...	...	...	...	...	...
III. Processes relating to stone, clay, glass, &c.	4	8	4	2	...	...	...	...	...	...	...	...	...
IV. Working in wood	10	5	2	...	...	...	...	...	...	...	...	...	...
V. Metal works, machinery, &c.	2	1	1	...	...	...	...	...	..	...	...	...	...
VI. Connected with food and drink, &c.	82	10	4	1	...	...	...	...	...	...	..	...	...
VII. Clothing and textile fabrics, &c.	13	11	3	...	...	...	1	...	...	...	...	...	...
VIII. Books, paper, printing, engraving, &c.	6	1	...	1	...	...	...	...	...	...	...	...	...
XI. Vehicles and fittings, saddlery, harness, &c.	6	9	2	...	...	...	...	...	...	...	...	..	...
XIII. Furniture, bedding, &c.	..	1	...	...	...	...	...	...	...	...	...	...	...
XIV. Drugs, &c.	1	...	...	...	...	...	...	...	...	...	...	...	...
XVII. Heat, light and power	8	3	..	..	...	...	...	...	...	...	...	...	...
XIX. Minor wares n.e.i. (laundry)	...	1	...	...	...	...	...	...	...	...	...	...	...
Total	133	50	17	4	..	...	1	...	...	...	...	...	..

ALBURY DISTRICT RETURNS.

NOTE.—This District was proclaimed on 1st November, 1909.

TABLE XXXVIII.

Classification of Persons employed, 1915.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
ting raw materials, product of pastoral pursuits	3	...	.....	...	.....	...	.....	4	...	4	...	4
and fats—animal, vegetable, &c.	...	...	.....	...	.....	...	.....	...	...	...	...	...
esses in stone, clay, glass, &c.	16	...	.....	2	.....	7	.....	43	...	52	...	52
king in wood	12	...	.....	4	.....	3	.....	40	...	47	...	47
al works, machinery, &c.	13	2	.....	2	.....	5	.....	46	...	55	...	55
nected with food and drink, &c.	74	3	...	12	.....	13	1	137	3	165	4	169
hing and textile fabrics, &c.	26	2	5	1	22	3	26	27	75	33	128	161
ks, paper, printing and engraving, &c.	11	4	.....	6	2	10	.....	50	1	70	3	73
cles and fittings, saddlery and harness, &c.	20	3	.....	9	.....	20	.....	96	...	128	...	128
niture, bedding, &c.	1	...	.....	..	.....	1	.....	2	...	3	...	3
ellery, &c.	1	1	.....	...	.....	1	.....	1	...	3	...	3
, light and power	7	...	.....	1	.....	...	.....	11	...	12	...	12
r wares, n.e.i.	3	...	.....	1	2	2	2	4	5	7	9	16
Total	187	15	5	38	26	65	29	461	84	579	144	723

TABLE XXXIX.

Horse-power of Machinery used, 1915.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
ting raw materials, product of pastoral pursuits	...	.....	...	1	11	11	...	.....	.....
and fats—animal, vegetable, &c.	...	.....	.....	...	.....	.....	...	.....	.....
esses in stone, clay, glass, &c.	1	16	12	...	.....	.....	4	38	29
king in wood	3	68	48	4	97	69	2	45	17
l works, machinery, &c.	2	40	29	2	22	6	5	27	18
ected with food and drink, &c.	5	530	259	3	26	15	4	95	62
ning and textile fabrics, &c.	...	.....	.....	1	3	2	1	3	2
s, paper, printing, engraving, &c.	...	.....	.....	6	49	37	2	5	4
cles and fittings, saddlery and harness, &c.	...	.....	...	3	39	25	3	15	10
niture, bedding, &c.	...	.....	.....	...	.....	.....	...	.....	.....
, light and power	1	3	1	5	203	98	1	11	7
r wares, n.e.i.	1	8	8	...	.....	.....	...	.....	.....
Total	13	665	357	25	450	263	22	239	149

TABLE XL.

Classification of Factories according to Number of Persons employed, 1915.

Class of Factory.	Number of Factories in which the number of persons employed is—														Total.
	Under 4	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and over.	
ting raw materials, product of pastoral pursuits	3	...	...	...	...	...	...	...	...	...	...	...	...	..	3
and fats—animal, vegetable, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
esses relating to stone, clay, glass, &c.	12	2	2	...	...	...	...	...	...	...	...	...	...	...	16
king in wood	8	1	3	...	...	...	..	...	...	...	...	...	...	...	12
l works, machinery, &c.	8	4	1	...	...	...	..	...	...	...	...	...	...	...	13
ected with food and drink, &c.	63	9	1	1	..	...	...	...	...	...	...	...	...	...	74
ning and textile fabrics, &c.	11	10	5	...	...	...	...	...	...	.	...	...	...	..	26
s, paper, printing, engraving, &c.	3	6	2	...	...	..	...	...	...	...	...	...	...	...	11
cles and fittings, saddlery, harness, &c.	7	9	3	1	...	...	...	...	...	..	...	...	...	...	20
niture, bedding, &c.	1	...	...	...	...	...	...	...	...	...	..	...	...	...	1
llery, &c.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
, light and power	7	...	...	...	...	...	..	...	...	...	...	...	..	...	7
r wares, n.e.i.	1	2	...	...	...	...	...	...	...	...	...	...	...	...	3
Total	125	43	17	2	...	...	...	...	...	...	...	...	...	...	187

OTHER DISTRICT RETURNS.

Table XLI.

Classification of Persons employed, 1915.

Class of Factory.	Number of Factories on Register.	Persons employed.									
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		To	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Fem
I. Treating raw materials, product of pastoral pursuits...	31	4	...	1	...	8	...	179	...	192	
II. Oils and fats—animal, vegetable, &c.	7	...	...	1	...	...	...	12	...	13	
III. Processes in stone, clay, glass, &c.	20	...	...	...	...	1	...	63	...	64	
IV. Working in wood	147	11	...	57	2	98	4	946	34	1,112	
V. Metal works, machinery, &c.	81	15	...	44	...	32	1	252	...	343	
VI. Connected with food and drink, &c.	396	32	1	95	6	146	5	1,620	14	1,893	
VII. Clothing and textile fabrics, &c	110	14	12	42	39	35	55	273	169	364	
VIII. Books, paper, printing and engraving, &c.	109	32	...	52	...	41	4	348	6	473	
XI. Vehicles and fittings, saddlery harness, &c.	180	28	...	75	...	94	1	616	1	813	
XIII. Furniture, bedding, &c.	15	1	...	4	...	11	...	47	1	63	
XIV. Drugs, chemicals, &c.....	1	...	.	...	...	...	...	3	...	3	
XVII. Heat, light and power	72	3	...	9	2	10	3	154	2	176	
XIX. Minor wares, n.e.i. (laundries)	9	...	1	2	1	2	3	16	16	20	
Total.....	1,178	140	14	382	50	478	76	4,529	243	5,529	

Table XLII.

Horse-power of Machinery used, 1915.

Class of Factory.	Steam.			Gas.			Elect	
	No. of Factories.	Horse-power.		No. of Factories	Horse-power.		No. of Factories.	
		Nominal.	Actually used.		Nominal.	Actually used.		No
I. Treating raw materials, product of pastoral pursuits	25	332	291	2	84	75	3	
II. Oils and Fats—animal, vegetable, &c.....	6	57	54	...	...	...	...	
III. Process in stone, clay, glass, &c.....	6	40	38	1	32	30	4	
IV. Working in wood.....	103	2,258	2,182	10	224	216	17	
V. Metal works, machinery, &c.....	11	93	93	17	205	193	19	
VI. Connected with food and drink, &c.	75	3,040	2,796	47	734	702	98	
VII. Clothing and textile fabrics, &c.....	...	...	...	1	3	3	5	
VIII. Books, paper, printing, engraving, &c.....	...	...	...	20	79	76	62	
XI. Vehicles and fittings, saddlery and harness, &c.	9	72	71	22	184	180	70	
XIII. Furniture, bedding, &c.....	1	2	2	6	43	41	3	
XVII. Heat, light and power.	13	1,387	1,363	17	785	749	31	
XIX. Minor wares, n.e.i.....	4	26	26	2	6	5	1	
Total.	253	7,307	6,916	145	2,379	2,270	313	

Table XLIII.

Classification of Factories according to Number of Persons employed, 1915.

Class of Factory.	Number of Factories in which the number of persons employed											
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.
I. Treating raw materials, product of pastoral pursuits...	17	9	4	...	1	...	...	...	...	...	..	...
II. Oils and fats—animal, vegetable, &c.....	7	...	...	...	...	...	...	...	...	...	...	...
III Processes relating to stone, clay, glass, &c.	13	7	...	...	...	...	...	...	...	..	..	...
IV. Working in wood	62	37	36	6	5	..	1	...	...	...	...	..
V. Metal works, machinery, &c.	45	30	5	...	1	...	...	...	...	...	...	...
VI. Connected with food and drink, &c.	303	70	15	1	2	...	...	1	4	...	...	...
VII. Clothing and textile fabrics, &c	32	69	5	2	2	...	...	...	...	...	...	..
VIII. Books, paper, printing, engraving, &c.	51	53	3	2	...	...	...	...	..	...	...	...
XI. Vehicles and fittings, saddlery, harness, &c.....	89	77	14	...	...	...	...	...	...	...	...	...
XIII. Furniture, bedding, &c.....	6	9	...	...	...	...	...	...	...	...	...	...
XIV. Drugs, chemicals, &c.....	1	...	...	...	...	...	...	...	...	...	...	...
XVII. Heat, light and power	56	14	2	...	...	...	...	...	...	...	...	...
XIX. Minor wares, n.e.i. (laundries)	2	7	...	...	...	...	...	...	...	...	...	...
Total	684	382	84	11	11	...	1	1	4	...	...	...

Factory and Shops Act, 1912.

Prosecutions during 1915.

Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £ s. d.	Costs. £ s. d.
			METROPOLITAN.					
dfern	Hall, J. P.	99 Marion-st., Redfern.	Laundry	45	Employing boy under 16 without a certificate of fitness.	G	0 15 0	0 6 0
dney	Harrington's, Ltd.	382 George-st., Sydney.	Photography.....	43	Not notifying overtime.	G	0 10 0	0 6 0
,, ...	Leong Lee.....	36 Hunt-st., Sydney	Furniture	49	Working before 7.30 a.m. in a furniture factory.	G	0 5 0	0 6 0
ddington ...	Oliver, A.	346 Oxford-st., Paddington.	Butcher	33	Not fencing mill-gearing.	G	3 0 0	0 7 0
dney	Henry, N.	Bay-st., Sydney ...	Laundry	38	Not reporting accident.	G	1 0 0	0 6 0
,, ...	,, ...	,, ...	,, ...	45	Employing girl under 16 without certificate of fitness.	G	1 0 0	0 8 0
ddington ...	Sutton, M. B. ...	Roylston-st., Paddington.	Joinery	7	Being in occupation of an unregistered factory.	G	1 0 0	0 7 0
dney	Jones, D., Ltd....	George-st., Sydney..	Dressmaking ...	43	Not notifying overtime.	NG	0 10 0	Nil.
,, ...	,, ...	,, ...	,, ...	43	Not keeping record of overtime.	G	1 0 0	0 7 0
,, ...	,, ...	,, ...	,, ...	43	Employing female overtime on more than three consecutive days.	G	3 0 0	0 7 0
,, ...	,, ...	,, ...	,, ...	43	Failing to pay time and a half for overtime.	G	2 0 0	0 7 0
,, ...	,, ...	,, ...	,, ...	43	,, ,, ...	G	2 0 0	0 7 0
,, ...	,, ...	,, ...	,, ...	43	,, ,, ...	G	2 0 0	0 7 0
,, ...	,, ...	,, ...	,, ...	43	,, ,, ...	G	2 0 0	0 7 0
,, ...	,, ...	,, ...	,, ...	43	,, ,, ...	G	2 0 0	0 7 0
,, ...	Ford, D. S.	729 George-street, Sydney.	Printer	33	Failing to fence mill-gearing.	G	3 0 0	0 6 0
,, ...	,, ...	,, ...	,, ...	45	Employing person under 16 without certificate of fitness.	G	0 13 0	0 7 0
,, ...	Deaton, G.	Douglas-st., Sydney	,, ...	20	Not keeping factory in cleanly state.	NG	5 0 0	0 6 0
,, ...	,, ...	,, ...	,, ...	33	Failing to fence mill-gearing.	NG	10 0 0	0 6 0
,, ...	,, ...	,, ...	,, ...	43	Failing to keep record of overtime.	NG	1 0 0	0 6 0
,, ...	,, ...	,, ...	,, ...	45	Employing person under 16 without certificate of fitness.	G	1 0 0	0 6 0
,, ...	McQuitty, A. ...	2 Wentworth-place, Sydney.	,, ...	43	Not recording overtime.	G	0 10 0	0 6 0
,, ...	,, ...	,, ...	,, ...	45	Employing person under 16 without certificate of fitness.	G	0 10 0	0 6 0
,, ...	Moore, F.	26 Market-street, Sydney.	Printing	33	Failing to fence mill-gearing.	G	2 0 0	0 6 0
,, ...	Cumberland Paper Board Mills, Ltd.	53 Day-st., Sydney	Paper-sorting ...	42	Employing female for over 5 hours without half an hour's interval.	G	0 10 0	0 6 0
,, ...	,, ,, ...	,, ,, ...	,, ,, ...	42	,, ,, ...	G	0 10 0	0 6 0
,, ...	,, ,, ...	,, ,, ...	,, ,, ...	42	,, ,, ...	G	0 10 0	0 6 0
,, ...	,, ,, ...	,, ,, ...	,, ,, ...	43	Not paying overtime rates.	G	0 10 0	0 7 0
,, ...	,, ,, ...	,, ,, ...	,, ,, ...	43	,, ,, ...	G	0 10 0	0 7 0
,, ...	,, ,, ...	,, ,, ...	,, ,, ...	43	Not recording overtime.	G	0 10 0	0 6 0
,, ...	,, ,, ...	,, ,, ...	,, ,, ...	68	Not paying tea-money	G	0 10 0	0 7 0
,, ...	,, ,, ...	,, ,, ...	,, ,, ...	68	,, ,, ...	G	0 10 0	0 7 0
,, ...	,, ,, ...	,, ,, ...	,, ,, ...	68	,, ,, ...	G	0 10 0	0 6 0
,, ...	,, ,, ...	,, ,, ...	,, ,, ...	68	,, ,, ...	G	0 10 0	0 6 0
,, ...	Wood, S.	35 York-st., Sydney	Printing	43	Not recording overtime.	G	0 10 0	0 6 0
lebe	Peele, A.	Trafalgar-street, Annandale.	Furniture	45	Employing boy under 16 without certificate of fitness.	G	0 14 0	0 6 0
,, ...	Theodore, G.....	Williams-lane, Leichhardt.	Baking	20	Not keeping factory in cleanly state.	G	1 0 0	0 6 0
,, ...	,, ...	,, ,, ...	,, ...	7	Being in occupation of an unregistered factory.	G	0 10 0	0 6 0
edfern	Norton, E. A. ...	Botany-rd., Mascot	Tanning	45	Employing boy under 16 without a certificate of fitness.	G	0 14 0	0 6 0
dney	Chambers, H. L.	Wentworth-place, Sydney.	Printing	43	Not paying overtime rates.	G	1 0 0	0 7 0

FACTORIES AND SHOPS ACT, 1912—*continued.*

Date.	Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £ s. d.
				METROPOLITAN—*continued.*				
18/2/15	Sydney	Chambers, H. L.	Wentworth-place, Sydney.	Printing.....	43	Not notifying overtime.	G	0 10 0
19/2/15	Glebe	Johnson Bros. & Co., Limited.	Queen-st., Glebe ...	Jam-making	41	Employing boy under 16 on prohibited machine.	G	1 0 0
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	R.15	Not providing proper proportion of wash-basins.	G	0 10 0
22/2/15	Newtown ...	Schmidt, H.	Hawkin-st., Newtown.	Furniture	49	Permitting men to work before 7.30 a.m. in furniture factory.	G	0 10 0
,,	,, ...	,, ...	,, ,, ...	,, ,, ...	49	,, ,, ...	G	0 10 0
24/2/15	Sydney	Hall, T.	69 Liverpool-street, Sydney.	,, ...	49	Permitting men to work after 6 p.m. in furniture factory.	G	1 0 0
,,	,, ...	Taylor, W.	,, ,, ...	,, ...	49	Working after 6 p.m. in furniture factory.	G	0 10 0
,,	,, ...	Denton, H.	,, ,, ...	,, ...	49	,, ,, ...	G	0 10 0
25/2/15	,, ...	Beard, Watson, Ltd.	York-st., Sydney	,, ...	43	Not notifying overtime.	G	0 10 0
,,	,, ...	Mortons, Ltd. ...	72 Ultimo-road, Sydney.	Printing	45	Employing boy under 16 without certificate of fitness.	G	0 10 0
,,	,, ...	,, ...	,, ,, ...	,, ...	43	Not paying overtime rates.	N G	1 0 0
,,	,, ...	,, ...	,, ,, ...	,, ...	23	Not fencing mill-gearing.	G	5 0 0
,,	Bulli	Molloy, J., junior	Woonona	Sawmilling	33	Not fencing circular saw.	N G	Dis
3/3/15	Balmain	Perdriau Rubber Co., Ltd.	Cary-st., Drummoyne.	Rubber goods ...	43	Not paying overtime rates.	G	1 0 0
,,	,, ...	,, ,, ...	,, ,, ...	,, ,, ...	43	,, ,, ...	G	1 0 0
,,	,, ...	,, ,, ...	,, ,, ...	,, ,, ...	43	,, ,, ...	G	1 0 0
,,	,, ...	,, ,, ...	,, ,, ...	,, ,, ...	43	,, ,, ...	G	1 0 0
,,	,, ...	,, ,, ...	,, ,, ...	,, ,, ...	42	,, ,, ...	G	1 0 0
,,	,, ...	,, ,, ...	,, ,, ...	,, ,, ...	43	,, , ...	...	Wit
,,	,, ...	,, ,, ...	,, ,, ...	,, ,, ...	43	,, ,, ...	...	Wit
,,	,, ...	,, ,, ...	,, ,, ...	,, ,, ...	14	Failing to exhibit time-sheet.	...	Wit
,,	,, ...	,, ,, ...	,, ,, ...	,, ,, ...	43	Failing to keep record of overtime.	G	0 15 0
4/3/15	Sydney	Bernard, H.	Day-st., Sydney ...	Picture-framing	45	Employing boy under 16 without a certificate of fitness.	G	1 0 0
,,	,, ...	,, ,, ...	,, ,, ...	,, ,, ...	68	Failing to pay tea-money.	G	1 0 0
,,	,, ...	,, ...	,, ,, ...	,, ,, ...	68	,, ,, ...	G	1 0 0
,,	,, ...	,, ...	,, ,, ...	,, ,, ...	68	,, ,, ...	G	1 0 0
,,	,, ...	,, ...	,, ,, ...	,, ,, ...	43	Failing to notify overtime.	G	1 0 0
,,	,, ...	Dudley, J. T. ...	222 Sussex-street, Sydney.	Tent-making ...	43	Failing to notify overtime.	G	1 0 0
,,	Redfern	Hackshall's, Ltd.	Old Botany-road, Mascot.	Biscuit-making...	20	Failing to keep factory in cleanly state.	G	0 10 0
9/3/15	Wollongong....	Parsons, J. H. ...	Crown-street, Wollongong.	Woodworking	43	Failing to notify overtime.	G	0 10 0
10/3/15	Newtown	Zuttion, P.....	693 King-street, St. Peters.	Biscuit-making...	68	Failing to pay tea-money.	G	0 10 0
,,	,, ...	,, ...	,, ...	,, ...	68	,, ,, ...	G	0 10 0
,,	,, ...	,, ...	,, ...	,, ...	20	Failing to keep factory in cleanly state.	G	1 0 0
,,	Sydney	Jonas, S.	88½ Bathurst-street, Sydney.	Printing.....	38	Failing to report accident.	G	1 0 0
11/3/15	Redfern	Spring, R. A.....	Mitchell-road, Alexandria.	Stove-making ...	43	Failing to notify overtime.	G	1 0 0
,,	Sydney	Grimley, Ltd.	263-9 Clarence-st., Sydney.	Saddlery.....	20	Failing to keep factory in cleanly state.	G	2 0 0
,,	,, ...	Jacobs, Z. J.....	Clarence-street, Sydney.	Clothing.....	43	Failing to keep record of overtime.	G	1 0 0
,,	,, ...	,, ...	,, ...	,, ...	45	Employing boy under 16 without certificate of fitness.	G	1 0 0
22/3/15	,, ...	"Co-operator," Ltd.	431A Kent-street, Sydney.	Printing	33	Failing to fence mill-gearing.	NG	5 0 0
23/3/15	Glebe.....	Aulsebrook & Sons, Ltd.	13 Lyons-road, Camperdown.	Biscuit-making...	45	Employing boy under 16 without certificate of fitness.	G	0 15 0
25/3/15	Sydney	Brent, R.	Shepherd-street, Darlington.	Saddlery.....	33	Failing to fence mill-gearing.	G	2 0 0
,,	North Sydney	Chaffer, W.	Gibbs-street, Willoughby.	Tanning.....	41	Employing boy under 16 at a prohibited machine.	G	0 1-
,,	,, ...	,, ...	,, ...	,, ...				

FACTORIES AND SHOPS ACT, 1912—*continued.*

Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £ s. d.	Costs. £ s. d.
			METROPOLITAN—*continued.*					
Newtown ...	Ross, J.	Bray-street, Erskineville.	Glass-making ...	44	Employing boy under 16 in a prohibited part of the factory	G	4 0 0	0 6 0
Sydney	Eclipse Printing Co., Ltd.	52–4 Bay-street, Sydney.	Printing	43	Failing to pay overtime rates.	G	1 0 0	0 6 0
,, ...	McArthur & Co., Limited.	77 York-street, Sydney.	Clothing	43	,, ,, ...	G	1 0 0	0 7 0
,, ...	,, ...	,, ...	,, ...	43	,, ,, ...	G	1 0 0	0 7 0
,, ...	McCarron, Stewart & Co.	22–6 Goulburn-st., Sydney.	Printing	20	Failing to keep factory in cleanly state.	NG	1 0 0	0 6 0
,, ...	,, ...	,, ...	,, ...	33	Failing to fence millgearing.	NG	2 0 0	0 6 0
,, ...	,, ...	,, ...	,, ...	41	Employing female at a prohibited machine	NG	2 0 0	0 6 0
Cogarah	Pulle, G.	Brighton-le-Sands	Macaroni-making	20	Failing to keep factory in cleanly state.	NG	Dismissed.	
Ashfield	Edward's Laundry, Ltd..	71 Liverpool-road, Ashfield.	Laundry	43	Failing to notify overtime.	G	1 0 0	0 6 0
,, ...	,, ...	,, ...	,, ...	43	Failing to pay overtime.	G	1 0 0	0 7 0
,, ...	,, ...	,, ...	,, ...	43	,, ,, ...	G	1 0 0	0 7 0
,, ...	,, ...	,, ...	,, ...	43	,, ,, ...	G	1 0 0	0 7 0
,, ...	,, ...	,, ...	,, ...	43	,, ,, ...	G	1 0 0	0 7 0
,, ...	,, ...	,, ...	,, ...	68	Failing to pay teamoney.	G	1 0 0	0 6 0
Newtown ...	Minahan, T.	King-st., Newtown	Boot factory	43	Failing to notify overtime.	G	1 0 0	0 6 0
Sydney	Hefren, A. J. ...	Liverpool-street, Sydney.	Clothing	11	Obstructing an Inspector.	NG	Dismissed.	
,, ...	,, ...	,, ...	,, ...	43	Failing to notify overtime.	G	1 0 0	0 8 0
,, ...	Blackwell, R. E.	422 Pitt-st., Sydney	Tailoring	45	Employing girl under 16 wthout a certificate of fitness.	G	1 0 0	0 7 0
,, ...	Cohen, D.	80 Bathurst-street, Sydney.	Clothing	43	Failing to keep record of overtime.	G	1 0 0	0 8 0
,, ...	Chapman, G. O.	188 Sussex-street, Sydney.	Tent-making	43	Failing to notify overtime.	G	1 0 0	0 6 0
Newtown ...	Smith, G.	Samuel-street, St. Peters.	Furrier	43	,, ,, ...	G	0 10 0	0 6 0
Sydney	Sheehy. R. (as owner).	15 Market-street, Sydney.	Hatmaking	39	Failing to provide means of escape in case of fire.	G	5 0 0	0 6 0
,, ...	Wetenhall, A. ...	City-road, Sydney	Furniture-making.	49	Permitting men to work after 6 p.m. in a furniture factory.	G	3 0 0	0 6 0
,, ...	Ridley, H. (employee).	City-road, Sydney	,, ...	49	Working after 6 p.m. in a furniture factory.	G	1 0 0	0 6 0
,, ...	Pearce, C. (employee).	,, ...	,, ...	49	,, ,, ...	G	1 0 0	0 6 0
,, ...	Connell, J. (employee).	,, ...	,, ...	49	,, ,, ...	G	1 0 0	0 6 0
,, ...	Kaplan, S. (employee).	,, ...	,, ...	49	,, ,, ...	G	1 0 0	0 6 0
,, ...	Eastes, D. (employee).	,, ...	,, ...	49	,, ,, ...	G	1 0 0	0 6 0
,, ...	Horne, M. (employee).	,, ...	,, ...	49	,, ,, ...	G	1 0 0	0 6 0
Redfern	Melville, Bach & Cramer, Ltd.	Phillip-st., Waterloo.	,, ...	49	Permitting men to work after 1 p.m. on Saturday in a furniture factory.	G	1 10 0	0 6 0
,, ...	Douglas, W. (employee).	,, ...	,, ...	49	Working after 1 p.m. on Saturday in a furniture factory.	G	0 5 0	0 6 0
,, ...	Bull, A. (employee).	,, ...	,, ...	49	,, ,, ...	G	0 5 0	0 6 0
,, ...	Field, A. (employee).	,, ...	,, ...	49	,, ,, ...	G	0 5 0	0 6 0
,, ...	Holywood, P. (employee).	,, ...	,, ...	49	,, ,, ...	G	0 5 0	0 6 0
Sydney	Weston, C. L. ...	539 Elizabeth-st., Sydney.	Shirtmaking	7	Being in occupation of an unregistered factory.	G	2 0 0	0 6 0
Glebe	Henley, J. W. ...	Johnston-st., Annandale.	Joinery	33	Failing to guard emery wheels.	G	2 0 0	0 6 0
,, ...	Lake, M.	157 Young-st., Annandale.	Cases	34	Failing to fence dangerous machinery.	G	5 0 0	0 6
Penrith.....	Brown, F.	St. Mary's	Sawmill	34	,, ,, ...	G	1 0 0	0 6
,, ...	Laylor, J.	,, ...	,, ...	34	,, ,, ...	G	1 0 0	0 6

FACTORIES AND SHOPS ACT, 1912—*continued.*

Date.	Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £	s.	d.	£
				METROPOLITAN—*continued.*							
4/5/15	Penrith.....	Emu and Prospect Gravel and Road Metal Co. Ltd.	Emu Plains	Road metal	40	Employing child under 14 without special permission.	N G	0	5	0	
,,	,, ...	,, ,, ...	,, ...	,, ...	33	Failing to fence millgearing.	N G	2	0	0	
6/5/16	Sydney	Philip, G. B. ...	Margaret-street, Sydney.	Printing	56	Failing to comply with request of Inspector.	G	0	10	0	
,,	,, ...	,, ...	,, ...	,, ...	33	Failing to fence millgearing.	G	2	0	0	
7/5/15	Newtown ...	Cumming, R. ...	George-st., Erskineville.	Boots	33	,, ,, ...	G	2	0	0	
,,	,, ...	Thornley and Sons Ltd.	Bolton-st., Marrickville.	Engineering	38	Failing to report accident.	G	2	0	0	
10/5/15	Sydney	Poullar's Ltd. ...	102–4 Albion-street, Surry Hills.	Dyers	34	Failing to fence dangerous machinery.	G	2	0	0	
12/5/15	Kogarah	Excelsior Macaroni Co.	Brighton-le-Sands...	Macaroni	20	Failing to keep factory in a cleanly state.	G	2	0	0	
13/5/15	Redfern	Scott, J.	Botany-rd., Mascot	Rope	33	Failing to fence millgearing.	G	2	0	0	
,,	Sydney	Rose, M.	Dixon-st., Sydney..	Clothing.....	45	Employing girl under 16 without a certificate of fitness.	G	1	0	0	
,,	,, ...	AustralutonStraw Hat Factory Ltd.	36 York-st., Sydney	Hats	43	Failing to pay overtime rates.	G	2	0	0	
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	,, ,, ...	G	2	0	0	
,,	,, ...	Ford Sherington Ltd.	Kippax-st., Sydney	Portmanteaux ...	34	Failing to fence dangerous machinery.	G	1	0	0	
,,	,, ...	,, ,, ...	,, ...	,, ...	41	Employing boy under 16 on prohibited machine.	N G				D.s
14/5/15	Newtown ...	Mair, J.	Brock's-lane, Newtown.	Laundry	38	Failing to report accident.	G	5	0	0	
20/5/15	Sydney	House, W. J.	362 Kent-street, Sydney.	Umbrellas	45	Employing boy under 16 without a certificate of fitness.	G	1	0	0	
,,	,, ...	Rosalky, M.	,, ,, ...	Caps	45	Employing girl under 16 without a certificate of fitness.	G	1	0	0	
21/5/15	Glebe	Buchanan, W. ...	Catherine-street, Forest Lodge.	Mantels	45	Employing boy under 16 without a certificate of fitness.	G	1	10	0	
3/6/15	Sydney	Abrahams, M. ...	433 Kent-street, Sydney.	Clothing.....	7	Being in occupation of an unregistered factory.	N G	2	0	0	
,,	,, ...	,, ...	,, ,, ...	,, ...	33	Failing to fence millgearing.	N G	2	0		
,,	,, ...	,, ...	,, ,, ...	,, ...	39	Failing to provide means of escape in case of fire.	N G	0	10		
,,	,, ...	Warburton Franki Ltd.	307 Kent-street, Sydney.	Electricians.....	33	Failing to fence millgearing.	G	2	0		
,,	,, ...	Halliday, J.	Erskine-st., Sydney	Engineering	33	,, ,, ...	G	2	0		
,,	,, ...	Jay, J. T.	,, ,, ...	Brass works	33	Failing to fence millgearing.	G	2	0		
,,	,, ...	Begg and Greig Ltd.	,, ...	Engineering	33	,, ,, ...	G	2	0		
,,	,, ...	Parsons Bros. & Co., Pty. Ltd.	Kent-st., Sydney ...	Tinsmithing	41	Emp'oying boy under 16 years on a prohibited machine.	G	1	0		
,,	,, ...	Steigrad, H.	,, ,, ...	Clothing.....	43	Failing to notify overtime.	N G				Di
,,	,, ...	Cohen and Sons Ltd.	,, ,, ...	,, ...	20	Failing to keep factory in cleanly state.	N G				Di
,,	,, ...	Freedman, A. ...	,, ,, ...	,, ...	7	Being in occupation of an unregistered factory.	N G				D
,,	,, ...	,, ...	,, ,, ...	,, ...	33	Failing to fence millgearing.	N G				D
,,	,, ...	,, ...	,, ,, ...	,, ...	39	Failing to provide means of escape in ease of fire.	G	1	0		
,,	,, ...	Comber, N. H. ...	21A Elizabeth-st., Sydney.	Tailoring	43	Failing to notify overtime.	G	1	0		
,,	,, ...	,, ...	,, ,, ...	,, ...	68	Failing to pay tea-money.	G	1	0		
4/6/15	Glebe	Stuart, A.	Moore and John sts., Leichhardt.	Cooper	34	Failing to fence dangerous machinery.	G	1	0		
	,, ...	Lovett, H.....	White-st., Leichhardt.	Cases	34	,, ,, ...	G	2	0		

FACTORIES AND SHOPS ACT, 1912—*continued.*

	Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £ s. d.	Costs. £ s. d.
				METROPOLITAN—*continued.*					
15	Glebe	Wilkins, S. J. ...	Excelsior-street, Leichhardt.	Brushes	45	Employing boy under 16 without certificate of fitness.	G	1 0 0	0 6 0
15	,, ...	Kiely, E.	250 Pitt-st., Sydney	Bookbinder	43	Failing to keep record of overtime.	G	1 0 0	0 6 0
	,, ...	,, ...	,, ,, ...	,, ...	43	Failing to notify overtime.	G	1 0 0	0 6 0
	,, ...	,, ...	,, ,, ...	,, ...	43	Employing female overtime for more than three hours.	G	1 0 0	0 7 0
	,, ...	Jacobs, Z. J. ...	230 Sussex-street, Sydney.	Clothing.....	43	,, ,, ...	G	2 0 0	0 9 0
	,, ...	,, ...	,, ,, ...	,, ...	43	Failing to notify overtime.	G	2 0 0	0 6 0
	Paddington ...	Ross, J.	St. Thomas street, Waverley.	Mason	14	Failing to exhibit the Factories and Shops Act.	G	1 10 0	0 6 0
	,, ...	,, ...	,, ,, ...	,, ...	R 15	Failing to provide closet accommodation.	G	5 0 0	0 6 0
15	Glebe	McKenzie, H. Ltd.	Glebe Island	Sawmill.....	33	Failing to fence millgearing.	G	3 0 0	0 6 0
15	Newtown	Toowoomba Foundry and Railway Rolling Stock Co.	King-st., St. Peters	Windmills	38	Failing to report accident.	G	1 0 0	0 9 0
15	Sydney	Henry Joseph, ...	Bay-st., Sydney ...	Laundry	34	Failing to fence dangerous machinery.	G	5 0 0	0 6 0
15	Manly	Jamieson, S.	Balgowlah-road, Manly.	Joinery	7	Occupying unregistered factory.	N G	2 0 0	0 6 0
	Redfern	Hodges, P. V. ...	Henderson-road, Alexandria.	Boot manufacing.	43	Failing to notify overtime.	G	0 10 0	0 6 0
15	Sydney	Hoskins, G. and C. Ltd.	Wattle-st., Ultimo	Pipe-making	33 (3)	Failing to fence millgearing.	G	0 5 0	0 7 0
	,, ...	Arnold, George ...	6 O'Connell-street, Sydney.	Drugs, &c.....	43	Failing to notify overtime.	G	0 5 0	0 6 0
	,, ...	,, ...	,, ,, ...	,, ...	68	Failing to pay teamoney.	G	0 2 6	0 7 0
	,, ...	,, ...	,, ,, ...	,, ...	68	,, ,, ...	G	0 2 6	0 7 0
15	,, ...	Elliott Bros. Ltd.	20 O'Connell-street, Sydney.	,, ...	43	Failing to notify overtime.	G	0 5 0	0 6 0
	,, ...	,, ,, ...	,, ,, ...	,, ...	68	Failing to pay teamoney.	G	0 2 6	0 7 0
	,, ...	,, ,, ...	,, ,, ...	,, ...	68	,, ,, ...	G	0 2 6	0 7 0
15	Newtown	Stanmore Preserving Co.	Bridge-road, Camperdown.	Jams	43	Employing female over 30 times overtime.	G	0 5 0	0 6 0
15	Sydney	Hill, W. H. Ltd.	Dixson-st., City ...	Printing	14	Failing to exhibit time sheet.	G	0 14 0	0 6 0
	,, ...	,, ,, ...	,, ...	,, ...	33 (3)	Failing to fence millgearing.	G	2 0 0	0 6 0
15	Redfern	Forsyth & Co. Ltd.	Bourke-st., Waterloo.	Rope-works	33 (3)	,, ,, ...	G	2 0 0	0 6 0
	,, ...	Hughes, F. W. Ltd.	Water Reserve, Botany.	Wool-scouring ...	33 (3)	,, ,, ...	G	2 0 0	0 6 0
	,, ...	Juleff and Sons Ltd.	70 Wells-st., Redfern.	Stove-making ...	33 (3)	,, ,, ...	G	2 0 0	0 6 0
	,, ...	Hansman, Ltd....	Marian-st., Redfern	Bootmaking	45	Employing boy under 16 without certificate.	G	1 0 0	0 6 0
	,, ...	,, ...	,, ,, ...	,, ...	45	,, ,, ...	G	1 0 0	0 6 0
15	Sydney	Woodhill, A. A.	Hutchinson-street, Sydney.	Furniture	7	Occupying unregistered factory.	G	2 0 0	0 6 0
15	,, ...	Norton, Wm. H.	123 Darlinghurst-road, City.	Motor repairs ...	14	Failing to exhibit copy of Act.	G	1 0 0	0 7 0
	,, ...	,, ,, ...	,, ,, ...	,, ...	33 (3)	Failing to fence millgearing.	G	2 0 0	0 7 0
	,, ...	Sharp, Myer	12–14 Chippen-st., Sydney.	Furniture	45	Employing lad without certificate of fitness.	G	1 0 0	0 7 0
15	,, ...	Harris, Barron ...	Strand Arcade, Sydney.	Blouses, &c.	37	Allowing girl to work lift.	G	0 5 0	0 6 0
	,, ...	Henderson, R. C. & Co. Ltd.	Randle-st., City	Hats.....	43	Failing to keep record of overtime.	G	0 5 0	0 6 0
	,, ...	,, ...	,, ...	,, ...	43	Failing to notify overtime.	G	0 5 0	0 6 0
15	Glebe	Aulsebrook and Sons Ltd.	Lyons-rd., Camperdown.	Biscuits.....	42	Employing male under 18 over 5 hours without interval.	G	0 10 0	0 6 0
	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Failing to notify overtime.	N G	1 0 0	0 6 0
	,, ...	,, ,, ...	,, ,, ...	,, ...	68	Failing to pay teamoney.	G	0 10 0	0 6 6

FACTORIES AND SHOPS ACT, 1912—*continued.*

Date.	Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £	s.	d.	Cost £	s
				METROPOLITAN—*continued.*								
6/8/15	Glebe	Aulsebrook and Sons Ltd.	Lyons-rd., Camperdown.	Biscuits	R15	Failing to provide closet accommodation	G	1	0	0	0	6
10/8/15	Redfern	Snell, C. F.	58 Baptist-st., Redfern.	Laundry engineering.	45	Employing boy under 16 years of age without certificate of fitness.	G	0	14	0	0	6
12/8/15	,, ...	Centennial Shoe Co. Ltd.	151 Walker-street, Redfern.	Boots and shoes	40	Employing boy under 14 years of age without special permission.	G	0	10	0	0	6
,,	Sydney	Green, T. & Co.	Mary Ann street. Ultimo.	Brass foundry ...	45	Employing boy under 16 years of age without certificate of fitness.	G	1	0	0	0	6
19/8/15	Redfern	Wunderlich Ltd.	45 George-st., Redfern.	Metal works	45	,, ,, ...	G	2	0	0	0	6
,,	Sydney	Simpson, Geo. ...	12 Regent-st., City	Art flowers	43	Failing to keep record of overtime.	G	1	0	0	0	6
,,	,, ...	,, ...	,, ...	,, ...	43	Failing to notify overtime.	G	1	0	0	0	6
,,	,, ...	Barnett Lyons ...	88 Liverpool-street, City.	Costumes.....	43	,, ,,	G	1	0	0	0	
25/8/15	Balmain	Bell and Frazer Ltd.	Terry-st., Rozelle...	Saw and moulding mills.	45	Employing boy under 16 years of age without certificate of fitness.	G	1	0	0	0	
,,	,, ...	,, ...	,, ...	,, ,, ...	45	,, ,, ...	G	1	0	0	0	
26/8/15	Redfern	Dobson, Franks Ltd.	Lachlan-st., Waterloo.	Steel work.....	34	Failing to fence dangerous machinery.	G	2	0	0	0	
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	45	Employing boy under 16 years of age without certificate of fitness.	G	1	0	0	0	
,,	,, ...	Sydney Paper Mills Ltd.	Botany	Paper-making ...	33 (3)	Failing to fence mill-gearing.	G	2	0	0	0	
,,	,, ...	Beard, Watson Ltd.	Phillip-st., Redfern	Furniture	45	Employing boy under 16 years of age without certificate of fitness.	G	1	0	0	0	
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	45	,, ,, ...	G	1	0	0	0	
26/8/15	Sydney	Marchant & Co. Ltd.	435 Kent-st., City	Stationers and printers.	43	Employing female for more than 3 hours overtime.	G	1	10	0	0	
,,	,, ...	,, ,, ...	,, ,, ...	,, ,, ...	43	,, ,, ...	G	1	10	0	0	
,,	,, ...	,, ,, ...	,, ,, ...	,, ,, ...	43	,, ,, ...	G	1	10	0	0	
31/8/15	Redfern	Aust. Glue and Gelatine Works.	O'Riordan-street, Alexandria.	Glue	43	Failing to keep record of overtime.	N G	0	10	0	0	
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Employing females overtime for more than 3 hours.	N G	0	1	0	0	
2/9/15	Paddington ...	Hinton, W.	Rennie-st., Paddington.	Boot Mfg.	45	Employing a boy under 16 without certificate of fitness.	G	1	0	0	0	
13/9/15	Newtown	Abel & Co. Ltd.	King-st., Newtown	Pastrycooking ...	43	Failing to notify overtime.	G	1	0	0	0	
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Failing to record overtime.	G	1	0	0	0	
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Employing females over 3 hours overtime.	G	1	0	0	0	
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	,, ,, ...	G	1	0	0	0	
15/9/15	Sydney	Mark Foys Ltd....	off Goulburn-street, Sydney.	Underclothing ...	45	Employing a boy under 16 without a certificate of fitness.	G	1	0	0	0	
,,	Parramatta ...	Corby, George ...	64 South-parade, Auburn.	Pastrycooking ...	7	Being in occupation of an unregistered factory.	G	1	0	0	0	
16/9/15	Redfern	Hordern, A. and Sons Ltd.	Great Buckingham-st., Redfern.	Furniture	33 (1)	Failing to fence fly-wheel.	G	2	0	0	0	
,,	Sydney	Politzky, Max ...	Brisbane-street, Sydney.	Printing	43	Employing a female over 3 hours' overtime.	G	2	0	0	0	
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Failing to record overtime.	G	2	0	0	0	
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Failing to notify overtime.	G	2	0	0	0	
5/10/15	Redfern	Rowlandson, A.	353 Cleveland-st., Redfern.	Engineering	33 (3)	Failing to fence mill-gearing.	G	2	0	0	0	
6/10/15	Sydney	Wills, W. D. & H. O.	267 Castlereagh-st., City.	Cigarettes	33 (3)	,, ,, ...	...	Withdrn				
,,	,, ...	Bowman, Mary ..	44 Campbell-street, City.	Knitting	45	Employing a girl under 16 without certificate of fitness.	G	0	5	0	0	
,,	,, ...	,, ,,	,, ,,	,, ...	45	,, ,,	G	0	5	0	0	
,,	,, ...	Larke Hoskins Ltd.	237 Castlereagh-st., Sydney.	Engineers	45	Employing a lad without certificate of fitness.	G	1	0	0	0	

FACTORIES AND SHOPS ACT, 1912—*continued.*

	Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £ s. d.	Costs. £ s. d.
				METROPOLITAN—*continued.*					
'15	Sydney	Cazanave, E. ...	296 Pitt-st., Sydney	Acetylene welder	45	Employing a lad without certificate of fitness.	G	0 15 0	0 6 0
	,, ...	Ward, J. W. Ltd.	Central-st., City ...	Boots	39 (3)	Failing to provide fire escape.	G	2 0 0	0 6 0
'15	Newtown ...	Charlesworth, J. W.	Unwin's Bridge rd., Marrickville.	Brieks	33 (3)	Failing to fence millgearing.	G	2 0 0	0 6 0
'15	Redfern	Hieks, W. T.....	Botany-rd., Waterloo.	Boots	45	Employing girl under 16 without certifieate of fitness.	G	1 0 0	0 6 0
	,, ...	,, ...	,, ,, ...	,, ...	45	,, ,, ...	G	1 0 0	0 6 0
'15	Newtown ...	Heiron and Smith Ltd.	Broek's-lane, Newtown.	Furniture	34	Failing to fence jointer.	G	2 0 0	0 9 0
	,, ...	Holeombe, G. R., junior.	Campbell-st., Newtown.	,, ...	45	Employing a boy under 16 without certificate of fitness.	G	1 0 0	0 12 0
'15	Redfern	Wawn, O. L.....	Pitt-st., Waterloo ..	Condiments	45	Employing girl under 16 without certificate of fitness.	G	1 0 0	0 6 0
	,, ...	Thatcher, F. W.	Gardener's-rd., Maseot.	Cooperage	33 (1)	Failing to fenee flywheel.	G	2 0 0	0 6 0
	,, ...	,, ,, ...	,, ,, ...	,, ...	34	Failing to fenee jointer	...	Withdrawn.	
'15	Sydney	Walder Ltd.	Pitt-st., Sydney ...	Tents, &c.	33 (3)	Failing to fence millgearing.	G	2 0 0	0 6 0
	,, ...	,, ...	,, ,, ...	,, ...	45	Employing a boy under 16 without certificate of fitness.	G	0 10 0	0 6 0
	,, ...	Robinson, J. ...	,, ,, ...	,, ...	33 (3)	Failing to fence millgearing.	G	2 0 0	0 6 0
	,, ...	Glynn, Eliza ...	117 Bathurst-street, Sydney.	Blouses, &e.	45	Employing a girl without certificate.	G	0 10 0	0 6 0
	,, ...	Benjamin, V. ...	363 Pitt-st., Sydney	Knitting	45	,, ,, ...	G	0 10 0	0 6 0
	,, ...	,, ...	,, ,, ...	,, ...	R 19	Employing a female near maehinery with hair loose.	G	0 10 0	0 6 0
15	Redfern	Simpson Lonsdale Ltd.	Woodburn-st. Redfern.	Printing	33 (3)	Failing to fence millgearing.	G	2 0 0	0 6 0
	,, ...	Howlin, W.	Cleveland-st., Redfern.	Refrigerators ...	34	Failing to fence bandsaw.	G	2 0 0	0 6 0
	,, ...	Heine, J., and Sons, Ltd.	George-st., Redfern.	Engineers	33	Failing to fence millgearing.	G	2 0 0	0 6 0
	,, ...	,, ,, ...	,, ,, ...	,, ...	34	Failing to fence emery wheel.	N G	3 0 0	0 6 0
	,, ...	Wawn, R.	Pitt-st., Waterloo...	Condiments	43	Failing to notify overtime.	G	1 0 0	0 6 0
15	Newtown ...	Vicars, J. & Co. Ltd.	Victoria-rd, Marrickville.	Woollen mills ...	33 (3)	Failing to fence millgearing.	G	3 0 0	0 6 0
	,, ...	Dawson, H.	13 Fitzroy-st, Newtown.	Straw hats	45	Employing a girl without eertificate.	G	1 0 0	0 6 0
	,, ...	Australian Woollen Mills.	Sydenham-rd., Marrickville.	Woollen mills ...	43	Failing to notify overtime.	G	1 0 0	0 7 0
15	Sydney	Lassetter & Co. Ltd.	Clarence-street, Sydney.	Dressmaking ...	43	,, ,, ...	G	0 5 0	0 6 0
	,, ...	,, ,, ...	,, ,, ...	,, ,, ...	45	Employing a girl under 16 without certificate of fitness.	G	0 10 0	0 6 0
	,, ...	Rohu, S. E.	Moore-st., Sydney..	Furrier	43	Failing to notify overtime.	G	0 5 0	0 7 0
15	Glebe	Carrington, A. ...	35 Parramatta-rd., Forest Lodge.	Confectioner	68	Failing to pay teamoney.	G	2 0 0	0 6 0
15	Parramatta ...	Vicars, J., Ltd. ...	Parramatta	Woollen mills ...	33	Failing to fenee millgearing.	...	Withdrawn.	
	,, ...	,, ,, ...	,, ...	,, ,, ...	43	Failing to keep record of overtime.	...	Withdrawn.	
15	Central	Epstein, A.	63 Ann-st., Sydney	Printing	14	Failing to exhibit time-sheet.	G	0 10 0	0 6 0
	,, ...	Wills, W. D. & H. O., Ltd.	Castlereagh-street, Sydney.	Cigarettes	43	Failing to notify overtime.	G	1 0 0	0 6 0
	,, ...	Leigh, S. T., & Co. Ltd.	,, ,, ...	Printing	44	Employing a male under 16 in connection with casting from molten metal.	G	2 10 0	0 6 0
	,, ...	,, ,, ...	,, ,, ...	,, ...	33	Failing to fence fly-wheel	G	0 10 0	0 6 0
	,, ...	,, ,, ...	,, ,, ...	,, ...	34	Failing to fence power press.	...	Withdrawn.	
15	Liverpool	Bull, H. & Co. Ltd.	Liverpool	Woollen mills ...	43	Failing to notify overtime.	G	3 0 0	0 6 0
15	Newtown	Weeks, W. T. ...	Farr-street, Marrickville.	Leather goods	20	Failing to keep factory in cleanly state.	N G	3 0 0	0 6 0
	,, ...	,, ...	,, ,, ...	,, ...	R 16	Failing to provide wash basins.	N G	2 0 0	0 6 0
	,, ...	,, ...	,, ,, ...	,, ...	45	Employing children without certificates.		Withdrawn.	
	,, ...	,, ...	,, ,, ...	,, ...	45	,, ,, ...		Withdrawn.	

FACTORIES AND SHOPS ACT, 1912—*continued.*

Date.	Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £ s. d.	Cost £ s.
				METROPOLITAN— *continued.*					
4/11/15	Sydney	Ward, J. W. Ltd.	Central-street, Sydney.	Boot repairing ...	R 19 (7)	Employing female near machinery with hair loose.	G	0 10 0	0
5/11/15	Ashfield	Edward's Laundry Ltd.	276 Liverpool-road, Ashfield.	Laundry	43	Failing to keep record of overtime.	G	2 0 0	0
,,	,, ...	,, ...	,, ,, ...	,, ...	43	Failing to notify overtime.	G	2 0 0	0
8/11/15	Sydney	Murdoch's Ltd. ..	Park-street, Sydney	Clothing.....	37	Male under 16 in charge of lift.		Withdrawn.	
,,	,, ...	Longshaw, T. ...	281 Pitt-street Sydney.	Locksmith.....	45	Employing child under 16 without certificate.	G	1 0 0	0
11/11/15	,, ...	Buckingham, L. V.	117 Bathurst-street, Sydney.	Clothing.....	45	Employing girl under 16 without certificate.	G	0 10 0	0
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	R 19 (7)	Employing girl near machinery with hair loose.	G	1 0 0	0
,,	,, ...	Blackwell, H. L.	Cunningham-lane, City.	Shirtmaking	33 (3)	Failing to fence millgearing.	G	2 0 0	0
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	R 19 (7)	Employing girl near machinery with hair loose.	G	0 10 0	0
,,	,, ...	Budge, James ...	209–15 Harris-street Pyrmont.	Engineering	45	Employing boy under 16 without certificate of fitness.	G	0 10 0	0
,,	,, ...	,, ...	,, ,, ...	,, ...	R 19 (5)	Boy under 16 in charge of boiler.	G	2 0 0	0
,,	,, ...	Sunderland, E. A.	Oliva-lane, Sydney	Laundry	45	Employing boy under 16 without certificate.		Summons not ser (removed).	
,,	,, ...	Courts, S.	Little Albion-street, Surry Hills.	Bags and sacks...	33 (3)	Failing to fence millgearing.	G	2 0 0	0
,,	,, ...	,, ...	,, ,, ...	,, ...	43	Failing to notify overtime.	G	0 10 0	0
,,	,, ...	,, ...	,, ,, ...	,, ...	43	Employing female over 3 hours' overtime.	G	0 10 0	0
,,	,, ...	,, ...	,, ,, ...	,, ...	43	,, ,, ...	G	0 10 0	0
,,	,, ...	,, ...	,, ,, ...	,, ...	R 16	Failing to provide wash basins.	G	0 10 0	0
,,	,, ...	Jacobs, Z. J. ...	228–30 Clarence-street, Sydney.	Clothing.....	45	Employing girl under 16 without certificate.	Ex parte.	0 10 0	0
,,	,, ...	Colville, J.....	117 Bathurst-street, Sydney.	Leather goods ...	14	Failing to exhibit time-sheet.	G	1 0 0	0
,,	,, ...	,, ...	,, ,, ...	,, ...	45	Employing boy under 16 without certificate.	G	0 10 0	0
,,	,, ...	Simpson, C. J. ...	Chalmer's-street, Sydney.	Printing.....	33	Failing to fence millgearing.	G	2 10 0	0
15/11/15	Paddington ...	Vrachnas, J. ...	39 Oxford-street, Paddington.	Laundry	33 (3)	,, ,, ...	G	2 0 0	0
,,	,, ...	,, ...	,, ,, ...	,, ...	R 15	Failing to screen conveniences for females	G	2 0 0	
16/11/15	Glebe.....	Taylor Bros. Ltd.	Trafalgar-street, Annandale.	Jam	43	Employing females overtime for more than 30 days in the year.	G	1 0 0	
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	,, ,, ...	G	1 0 0	
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	,, ,, ...	G	1 0 0	
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Failing to notify overtime.	G	1 0 0	
18/11/15	Sydney	Neave, Ed. J. ...	105 Liverpool-street Sydney.	Engineering	45	Employing boy under 16 without certificate.	G	1 0 0	
,,	,, ...	Simmons, Mick	720½ George-street, Sydney.	Tobacco packing	45	,, ,, ...	G	1 0 0	
19/11/15	Newtown	Dose, F. W.	Bolton-street, Marrickville.	Pattern-makers	45	,, ,, ...	G	0 10 0	
22/11/15	Sydney	Woodhill, A. A.	Hutchinson-street, Sydney.	Furniture	34	Failing to fence dangerous machinery.	G	2 0 0	
23/11/15	Burwood	Burwood Ice Works Ltd.	Burwood-road, Burwood.	Ice	33 (1)	Failing to fence flywheel.	N G	2 0 0	
24/11/15	Newtown ...	Metropolitan Knitting and Hosiery Co. Ltd.	Victoria-road, Marrickville.	Knitted goods ...	43	Failing to notify overtime.	G	0 10 0	
,,	,, ...	...	,, ...	,, ...	43	,, ,, ...	G	0 10 0	
25/11/15	Redfern	Henderson C. ...	86 Regent-st., Redfern.	Aprons	R 19 (7)	Employing female near machinery with hair loose.	G	1 0 0	

FACTORIES AND SHOPS ACT, 1912—*continued.*

Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £	Penalty. s.	Penalty. d	Costs. £	Costs. s.	Costs. d.
			METROPOLITAN—*continued.*									
Redfern	Langley Hy. ...	Phillip-st., Waterloo.	Hatmaking	34	Failing to fence dangerous machinery.	N G	2	0	0	0	6	0
Balmain	Bell and Frazer Ltd.	Terry-st., Rozelle...	Joinery	32 (3)	Failing to fence millgearing.	N G	3	0	0	0	9	0
Sydney	Pepper J. C. ...	38 Wentworth-avenue, Sydney.	Clothing.....	45	Employing female under 16 years without certificate of fitness.	G	1	0	0	0	7	0
,, ...	Ward J. Ltd. ...	15 Marshall-st., Surry Hills.	Stovemaking.....	45	Employing boy under 16 without certificate of fitness.	ex-parte.	1	0	0	0	7	0
,, ...	Schweppes Ltd...	71 Foveaux-st., Sydney	Aerated waters ..	33 (3)	Failing to fence millgearing.	G	2	10	0	0	6	0
,, ...	,, ...	,, ,, ...	,, ...	43	Failing to notify overtime.	G	0	10	0	0	6	0
,, ...	,, ...	,, ,, ...	,, ...	43	Failing to keep record of overtime.	G	0	15	0	0	6	0
,, ...	,, ...	,, ,, ...	,, ...	43	Failing to pay time and a half for overtime.	G	0	15	0	0	6	0
,, ...	,, ...	,, ,, ...	,, ...	R 15	Failing to provide sufficient W.C. accommodation.	G	1	0	0	0	6	0
,, ...	Austral Knitting Hat and Cap Factory.	Small-st., Sydney...	Knitting	43	Failing to notify overtime.	G	1	0	0	0	6	0
,, ...	Brown, Walter	176 William-st., Sydney.	Laundry	43	Failing to record overtime.	G	1	0	0	0	6	0
,, ...	Irvine, A.	Barcom-avenue, Sydney.	Joinery	33 (4)	Failing to maintain fences.	G	1	0	0	0	6	0
,, ...	Varley, H. H. Ltd.	37–9 Foveaux-st., Sydney.	Straw Hats	43	Failing to notify overtime.	ex-parte.	1	0	0	0	6	0
,, ...	Snowball, George	331 Kent-st., Sydney.	Clothing.....	45	Employing lad under 16 years of age without certificate.	G	1	0	0	0	7	0
,, ...	,, ,, ...	,, ,, ...	,, ...	R 15	Failing to provide proper W.C. accommodation.	G	1	0	0	0	6	0
,, ...	,, ,, ...	,, ,, ...	,, ...	R 16	Failing to provide wash basins.	G	1	0	0	0	6	0
Redfern	Crossby, P.	Morehead-street, Redfern.	Dyeing	45	Employing lad under 16 years of age without certificate of fitness.	G	1	10	0	0	6	0
,, ...	Swinbourne, J. F	Water Reserve. Botany.	Wool washing ...	33 (3)	Failing to fence millgearing.	G	2	0	0	0	6	0
,, ...	Smith, Arthur ...	Mintmore-avenue, Waterloo.	Box-making	33	Failing to fence circular saw.	G	5	0	0	0	6	0
,, ...	Lee, R. W.	Hollingshead-st., Mascot.	Hair curling	33 (2)	Failing to fence millgearing.	G	3	0	0	0	6	0
,, ...	Anderson's Tanneries Ltd.	Aylesbury-st., Botany.	Tanning	33 (3)	,, ,, ...	G	3	0	0	0	6	0
,, ...	Lee, Alfred	Underwood-st., Sydney.	Bootmaking	33 (3)	,, ,, ...	G	2	10	0	0	6	0
,, ...	Bowen, L. J.....	John-st., Waterloo.	,, ...	33 (3)	,, ,, ...	N G	5	0	0	0	6	0
,, ...	McWilliam, P. ...	Bunnerong-rd., Botany.	Woolwashing ...	45	Employing boy under 16 years of age without certificate.	G	0	10	0	0	6	0
,, ...	,, ...	,, ,, ...	,, ...	33 (3)	Failing to fence millgearing.	N G	5	0	0	0	6	0
Sydney	Dew, Sydney	117 Bathurst-st., Sydney.	Shirtmaking	45	Employing girl without certificate.	G	1	0	0	0	6	0
,, ...	Hogarth, Thomas	10 Cunningham-st., Sydney.	Cabinetmaking	33	Failing to fence jointer.	G	5	0	0	0	6	0
,, ...	Kelly, Robert ...	Parker-st., Sydney	Shirtmaking	R 19 (7)	Employing girl near machinery with hair loose.	G	1	0	0	0	6	0
,, ...	Brandt Bros. Ltd.	236 Pitt-st., Sydney	Lamps	34 (5)	Failing to maintain guards.	G	10	0	0	0	6	0
Redfern	Colonial Combing Spinning and Weaving Co. Ltd.	Lord-st., Botany ...	Fanning wool-tops, &c.	33 (3)	Failing to fence millgearing.	G	5	0	0	0	6	0
			NEWCASTLE DISTRICT.									
Newcastle ...	Newcastle Nut and Bolt Co.	Albert-st., Wickham	Boltmaking	38	Failing to report accident.	G	1	0	0	0	6	0
,, ...	Sanders, J.	147 Hunter-st., Newcastle	Pastrymaking ...	43	Failing to notify overtime.	G	0	5	0	0	7	0
,, ...	,, ...	,, ...	,, ...	43	Working female overtime more than 30 times during year.	G	0	5	0	0	7	0

FACTORIES AND SHOPS ACT, 1912—*continued.*

Date.	Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £ s. d.
				NEWCASTLE DISTRICT—*continued.*				
15/3/15	Newcastle ...	Sanders, J.	147 Hunter-street, Newcastle.	Pastrymaking ...	43	Employing female overtime on more than three consecutive days.	G	0 10 0
,,	,, ...	,, ...	,, ,,	,, ...	43	Employing female overtime for more than three hours.	G	0 5 0
,,	,, ...	,, ...	,, ,,	,, ...	43	Failing to pay time and a half for overtime.	G	0 10 0
,,	,, ...	Peate, A. & Co....	511 Hunter-street, Newcastle	Tailoring	20	Failing to keep factory in cleanly state.	G	3 0 0
,,	,, ...	,, ,, ...	,, ,,	,, ...	R16	Failing to provide wash basins.	G	2 0 0
,,	,, ...	Davies, M.....	431 Hunter-street, Newcastle.	Confectionery ...	43	Failing to notify overtime.	G	0 10 0
,,	,, ...	,, ...	,, ,,	,, ...	43	Working female overtime on more than 30 times during year.	G	0 10 0
,,	,, ...	,, ...	,, ,,	,, ...	43	Employing boy under 16 overtime on more than 3 consecutive days.	G	2 0 0
,,	,, ...	,, ...	,, ,,	,, ...	R 15	Failing to provide closet accommodation.	...	Withdn
,,	,, ...	Arnott, W. Ltd.	Melville-street, Newcastle.	Biscuit-making	26	Failing to provide seating accommodation.	N G	2 0 0
,,	,, ...	,, ...	,, ,,	,, ...	33	Failing to fence millgearing.	N G	Dismi
,,	,, ...	Lee & Co.	99 Hunter-street, Newcastle.	Tailoring	20	Failing to keep factory in cleanly state.	G	4 0 0
,,	,, ...	Davies, W.	Bolton-street, Newcastle.	Printing.....	43	Not notifying overtime.	G	0 10 0
,,	,, ...	,, ...	,, ,,	,, ...	45	Employing boy under 16 without a certificate of fitness.	G	0 10 0
,,	,, ...	Poole Ltd.	74 Hunter-street, Newcastle.	Tailoring	20	Not keeping factory in cleanly state.	G	5 0 0
18/3/15	W. Maitland	Bragg, C.	High-street, West Maitland.	Laundry	33	Failing to fence millgearing.	G	1 0 0
,,	,, ...	Dimmock's Ltd.	,, ,,	Printing.....	33	,, ,, ...	N G	0 4 0
,,	,, ...	Tipper, W.	,, ,,	,, ...	33	,, ,, ...	G	1 0 0
,,	,, ...	,, ...	,, ,,	,, ...	20	Not keeping factory in cleanly state.	G	2 0 0
,,	,, ...	Cameron, E.	,, ,,	Photography.....	20	,, ,, ...	G	2 0 0
,,	,, ...	,, ...	,, ,,	,, ...	7	Being in occupation of an unregistered factory.	G	0 10 0
19/3/15	Newcastle ...	Lauer, L.	Darby-street, Newcastle.	Toy-making	33	Failing to fence millgearing.	N G	0 10 0
,,	,, ...	Leslie & Co.	94 Hunter-street, Newcastle.	Tailoring	20	Failing to keep factory in cleanly state.	G	2 0 0
,,	,, ...	Davies, W.....	Bolton-street, Newcastle.	Printing.....	33	Failing to fence millgearing.	N G	0 10 0
,,	,, ...	Irelands' Ltd. ...	Brown-street, Newcastle.	Food Supply.....	33	,, ,, ...	G	2 0 0
,,	,, ...	,, ,, ...	,, ,,	,, ...	43	Failing to pay time and a half for overtime.	G	0 10 0
23/4/15	Gosford	West (Mrs.) E. ...	Ourimbah	Sawmill	33	Failing to fence machinery.	G	2 0 0
26/4/15	W. Maitland	McKenzie, Colin	Simple-street, West Maitland.	Ice	33	,, ,, ...	G	2 0 0
,,	,, ...	Payne, H. J. ...	High-street, West Maitland.	Boot Repairs ...	7	Being in occupation of an unregistered factory.	G	1 0 0
21/5/15	Newcastle	Clayton, J.....	Bennett-street. Hamilton.	Baker.....	7	,, ,, ...	G	2 0 0
14/6/15	,, ...	Castlemaine Brewery.	Charlton-street. Hamilton.	Brewery.....	38	Failing to report accident.	G	0 10 0
15/6/15	Cessnock	Hartley, J.....	Vincent-street, Cessnock.	Tailoring	R 16	Failing to provide wash basins.	G	0 10 0
,,	,, ...	D'Argeavel, R.....	,, ,,	,, ...	R 15	Failing to provide closet accommodation.	G	2 0 0
,,	,, ...	,, ...	,, ,,	,, ...	R 16	Failing to provide wash basins.	G	0 10 0
,,	,, ...	Guest, H.	,, ,,	,, ...	R 16	,, ,, ...	G	0 10 0
16/6/15	Kurri Kurri...	Co-operative Society.	Kurri Kurri	,, ...	R 16	,, ,, ...	G	0 10 0
19/7/15	W. Maitland	Pender Bros.....	Elgin-street. West Maitland.	Timber	16	,, ,, ...	N G	0 10 0

FACTORIES AND SHOPS ACT, 1912—*continued.*

Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £ s. d.	Costs. £ s. d.
NEWCASTLE DISTRICT—*continued.*								
W. Maitland	Pender Bros. ...	Elgin-street, West Maitland.	Timber	33	Failing to fence dangerous machinery.	N G	order made.	0 6 0
Newcastle ...	Morrison and Bearby.	Carrington.....	Engineering.....	33	,, ,, ...	N G	2 0 0	0 6 0
W. Maitland	Jin Lee	West Maitland	Laundry	7	Failing to register premises.	G	1 0 0	0 6 0
WESTERN DISTRICT.								
Lithgow	Madell, D. V. ...	Main-st., Lithgow	Tailoring	20	Not keeping factory in cleanly state.	N G	0 10 0	0 6 0
,, ...	,, ...	,, ,, ...	,, ...	43	Failing to notify over time.	N G	0 10 0	0 6 0
,, ...	Gale, J. H.	Bowenfels, N.S.W.	Woollen mills ...	43	Working females overtime on more than 30 times during year.	G	2 0 0	0 8 0
,, ...	,, ...	,, ,, ...	,, ,, ...	43	Not notifying overtime.	G	1 0 0	0 7 0
,, ...	Lews, E. A.	Main-st., Lithgow...	Tailoring	43	,, ,, ...	G	0 5 0	0 8 0
,, ...	Wagstaff, Margaret.	Lithgow	Laundry	69	Failing to keep record of overtime.	G	0 10 0	0 6 0
,, ...	,, ,, ...	,, ...	,, ...	68	Failing to pay tea-money.	G	0 2 6	0 7 0
,, ...	Doogood Printing Co.	Namoi-st., Lithgow	Printing	43	Failing to keep record of overtime.	G	1 0 0	0 6 0
,, ...	,, ,, ...	,, ,, ...	,, ...	43	Failing to notify overtime.	G	0 10 0	0 6 0
,, ...	,, ,, ...	,, ,, ...	,, ...	68	Failing to pay tea-money.	G	0 5 0	0 7 0
,, ...	Hoskins, G. and C. Ltd.	Lithgow	Ironworks	38	Failing to report accident.	G	1 0 0	0 6 0
,, ...	,, ,, ...	,, ...	,, ...	38	,, ,, ...	G	1 0 0	0 6 0
,, ...	,, ,, ...	,, ...	,, ...	38	,, ,, ...	G	1 0 0	0 6 0
,, ...	,, ,, ...	,, ...	,, ...	38	,, ,, ...	G	1 0 0	0 7 0
,, ...	,, ,, ...	,, ...	,, ...	38	,, ,, ...	G	1 0 0	0 7 0
,, ...	,, ,, ...	,, ...	,, ...	38	,, ,, ...	G	1 0 0	0 7 0
,, ...	,, ,, ...	,, ...	,, ...	38	,, ,, ...	G	1 0 0	0 7 0
,, ...	,, ,, ...	,, ...	,, ...	38	,, ,, ...	G	1 0 0	0 7 0
,, ...	,, ,, ...	,, ...	,, ...	38	,, ,, ...	...	Withdrawn.	
,, ...	,, ,, ...	,, ...	,, ...	33	Failing to fence millgearing.	G	1 0 0	0 6 0
,, ...	,, ,, ...	,, ...	,, ...	33	,, ,, ...	G	1 0 0	0 6 0
,, ...	,, ,, ...	,, ...	,, ...	45	Employing lad without certificate of fitness.	G	1 0 0	0 7 0
,, ...	,, ,, ...	,, ...	,, ...	45	,, ,, ...	G	1 0 0	0 7 0
,, ...	,, ,, ...	,, ...	,, ...	45	,, ,, ...	G	1 0 0	0 7 0
,, ...	,, ,, ...	,, ...	,, ...	45	,, ,, ...	G	1 0 0	0 7 0
,, ...	,, ,, ...	,, ...	,, ...	45	,, ,, ...	G	1 0 0	0 7 0
GOULBURN DISTRICT.								
Moss Vale ...	Cleary J. E. ...	Moss Vale	Coachbuilding ...	45	Employing a boy under 16 without certificate of fitness.	G	0 10 0	0 7 0

TABLE XLIV.

Prosecutions in each District during the year 1915.

District.	Informations Laid.	Convictions.	Dismissals.	Withdrawn on Payment of Costs.	Withdrawals (Other).
opolitan	335	315	8	.....	12
astle	42	40	1	.....	1
ry	.....	.....	.....	.....	.....
en Hill.....	.....	.....	.....	.....	.....
ern	32	31	.....	.....	1
burn	1	1	.....	.....	.....
Totals	410	387	9	.....	14

Prosecutions, 1911–15.

Year.	Informations Laid.	Convictions.	Dismissals.	Withdrawals (Costs Paid).	Withdrawals (Other).
.....	131	110	5	2	14
.....	124	118	3	.....	3
.....	90	89	1	....	.....
.....	177	168	2	1	6
....	410	387	9	.....	14

[Three diagrams.]

Sydney: William Applegate Gullick, Government Printer.—1916.

1917.
(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

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DEPARTMENT OF LABOUR AND INDUSTRY

REPORT

ON THE WORKING OF THE

FACTORIES AND SHOPS ACT, 1912

DURING THE YEAR 1916.

Printed under No. 7 Report from Printing Committee, 13 September, 1917.

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1917.

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THE TWENTIETH SERIES OF ANNUAL REPORTS BY INSPECTORS APPOINTED UNDER THE FACTORIES AND SHOPS ACT, 1912, FURNISHED TO THE MINISTER FOR LABOUR AND INDUSTRY IN TERMS OF SECTION 19 OF THAT ACT.

The Under Secretary, Department of Labour and Industry, to The Honorable the Minister for Labour and Industry.

Department of Labour and Industry,

Sir, 30 June, 1917.

I have the honour to forward, for submission to Parliament, in terms of section 19 of the Factories and Shops Act, 1912, Annual Reports on the operations of that Act by each of the Inspectors appointed thereunder, for the year ending the 31st December, 1916.

I have the honor to be, Sir,
Your obedient servant,
J. B. HOLME,
Under Secretary.

Report of Mr. C. J. Alderdice, Chief Inspector of Factories.

Administration.

During the year 1916 the Inspectorial Staff of the Department was kept busy in the work of factory inspection, and in making investigations under the Industrial Arbitration Act. In May and June country tours of inspection were undertaken by seven Inspectors, through those parts of the State which had been brought under the operation of the Factories and Shops Act, as from the 1st July, 1915, and instructions given on a previous tour in September, 1915, were in most cases found to have been satisfactorily complied with. Of the clerical staff, two officers enlisted with the Australian Imperial Forces and their places were filled by temporary clerks. A branch office was established in Lismore in March, Mr. Inspector Huntley from Newcastle, being placed in charge thereof. Mr. Inspector Wallace was placed in charge of the Lithgow Office, as from 1st January. Mr. Inspector Dunleavy was transferred from the Metropolitan District, and placed in charge of the branch office at Newcastle; Mr. Inspector Clark was transferred from the Metropolitan District to Newcastle, and Mr. Inspector Jackson was transferred from the Metropolitan District to Broken Hill from the 1st January.

Cards of instruction served on the occupiers of factories within the Metropolitan District numbered 15,483 for 1916 compared with 14,377 in 1915, and in the Newcastle District 1,178 as against 769 in 1915. In the rest of the State the cards of instruction totalled 1,819.

Appointments and Changes in the Staff.

The administration of the Scaffolding and Lifts Act, 1912, was transferred from the Department of Public Works to the Department of Labour and Industry in April. Mr. P. A. Fildes, Officer-in-Charge, was appointed Departmental Engineer and Inspector of Factories on 4th August; Mr. F. A. Davis was appointed a Factory Inspector on 4th February; Miss Brown and Miss Stuart-Robertson received similar appointments on 11th February, and Miss Scobie on 31st March. Mr. G. W. S. Dalby was transferred from the Dredge Service, Department of Public Works, to the position of Inspector of Factories on 13th October, 1916. Mr. Inspector Thyer resigned his position as an Inspector in the Department as from 9th December; Mr. Ogilvie was appointed an Assistant Factory Inspector on probation on 24th November; and Mr. A. R. Williams, and Mr. T. G. Bennet, Inspectors under the Scaffolding and Lifts Act, were appointed Factory Inspectors on 1st December.

Orders and Proclamations.

By a notification in the *Government Gazette* of 30th December, 1915, the Minister for Labour and Industry, by an order under section 41 of the Factories and Shops Act, prohibited the employment in any factory at or in connection with machinery specified in a Schedule and described as dangerous, of males under sixteen years of age, and of females. A copy of this order has been served on the occupiers of factories in which any of the machines specified are used.

On 16th May, the Minister by an Order published in the *Government Gazette*, exempted from the operation of the order previously referred to the employment of such persons at corner-cutting machines, corner-staying machines, creasing and bending machines and slotting machines, if such machines are kept fitted, while in motion, with efficient safeguards or appliances.

Records

Records.

The following table shows the cards of inspection, correspondence, circulars, and certificates of fitness issued :—

District.	Cards of Inspection.	Correspondence.	Circulars	Certificates of Fitness issued.
Metropolitan	15,483	7,015	12,748	5,004
Newcastle	1,178	2,337	.....	403
Broken Hill	160	661	.....	28
Rest of State	1,659	273	.....	122
Total	18,480	10,286	1,2748	5,557

The Year's Statistics.

The year 1916 is the first complete year during which the Factories and Shops Act has operated over the whole of the State, and the figures furnished in this Report will be the basis for the purposes of comparison with the figures of subsequent years.

Owing to a dislocation in the coal-mining industry during the latter part of November, which materially affected for the time the number of persons employed in many of the industries, the statistics for 1916 were collected for the week ended 4th November. On that date there were throughout the whole State on the records of the Department, 8,065 factories, employing 92,652 persons, of whom 63,895, or 69 per cent., were males, and 28,757, or 31 per cent., were females, compared with 7,425 factories employing 99,223 persons at the end of 1915, of whom 70,517, or 71 per cent., were males, and 28,706, or 29 per cent., were females. Thus, although there is an increase of 640 factories, there is a decrease of 6,571 persons. The figures for 1916 show a decrease in male employment of 6,622 persons as compared with those for the previous year, while female employment shows a slight increase of 51 in 1916 as compared with the figures at the end of 1915. The decrease in male employment is largely due to the fact that nearly 60,000 volunteers left the State of New South Wales during the year to fight for the Empire with the Australian Imperial Forces, making a total of over 100,000 for the years 1915–1916, as well as to the shortage of material in many industries, and to the severe financial strain due to the continuance of the war.

Details for each district of the number and sex of persons, class of factory in which they are employed, horse-power of machinery used, increase or decrease, &c., will be found in the Appendices.

Registration of Factories during Year 1916.

District.	Registrations effective at 31st December, 1915. *	1916.			Registrations effective at 31st December, 1916.
		Registrations.	Cancellations.	Increase (+) or Decrease (—).	
Metropolitan	4,641	1,047	850	(+) 197	4,838
Broken Hill	130	31	13	(+) 18	148
Newcastle	750	160	133	(+) 27	777
Rest of State	1,978	544	189	(+) 355	2,333
Total	7,499	1,782	1,185	(+) 597	8,096

* Adjusted figures.

Metropolitan District.

For statistical purposes in connection with the Annual Report, the county of Cumberland will be the area referred to in future as the Metropolitan District, and a comparison of figures for subsequent years will be made with those for 1916 in respect of such area.

On 4th November, 1916, there were 4,814 registered factories in the Metropolitan District, employing 74,027 persons. Of this number males represent 47,378, and females 26,649, or 64 and 36 per cent. respectively. Only 4,355, or 5·9 per cent., of the total are under 16 years of age, 8,055, or 10·9 per cent., are between 16 and 18 years, 10,223, or 13·8 per cent., are between 18 and 21 years, and the remainder, 51,394, or 69·4 per cent., are over 21 years of age.

Of the total males employed, 1,892, or 3·9 per cent., are under 16 years of age, 3,709, or 7·9 per cent., are between 16 and 18 years of age, 4,178, or 8·9 per cent., are between 18 and 21 years, and the remainder, 37,599, or 79·3 per cent., are over 21 years of age.

Of the total females employed, 2,463, or 9·2 per cent., are under 16 years of age, 4,346, or 16·3 per cent., are between 16 and 18 years of age, 6,045, or 22·7 per cent., are between 18 and 21 years, and the remainder, 13,795, or 51·8 per cent., are over 21 years of age.

There is only a slight difference in the number of females under 21 years of age compared with those over 21, the figures being 12,854 and 13,795 respectively, while in the case of males, the number under 21 years of age is 9,779 compared with 37,599 over 21 years of age. Whereas there are more females than males under 21 years of age employed in the factories in the Metropolitan District, the males over 21 years of age exceed the females over that age by nearly $2\frac{3}{4}$ to 1 (*see* Diagram " A.").

During the period 1909 to 1913 the percentage of boys and girls under 16 years of age employed in factories in the Metropolitan District regularly and steadily decreased, but

DIAGRAM A.

Showing Percentages of Persons of each Sex, in Age-groups, of Total Number employed in the Metropolitan District, 1916.

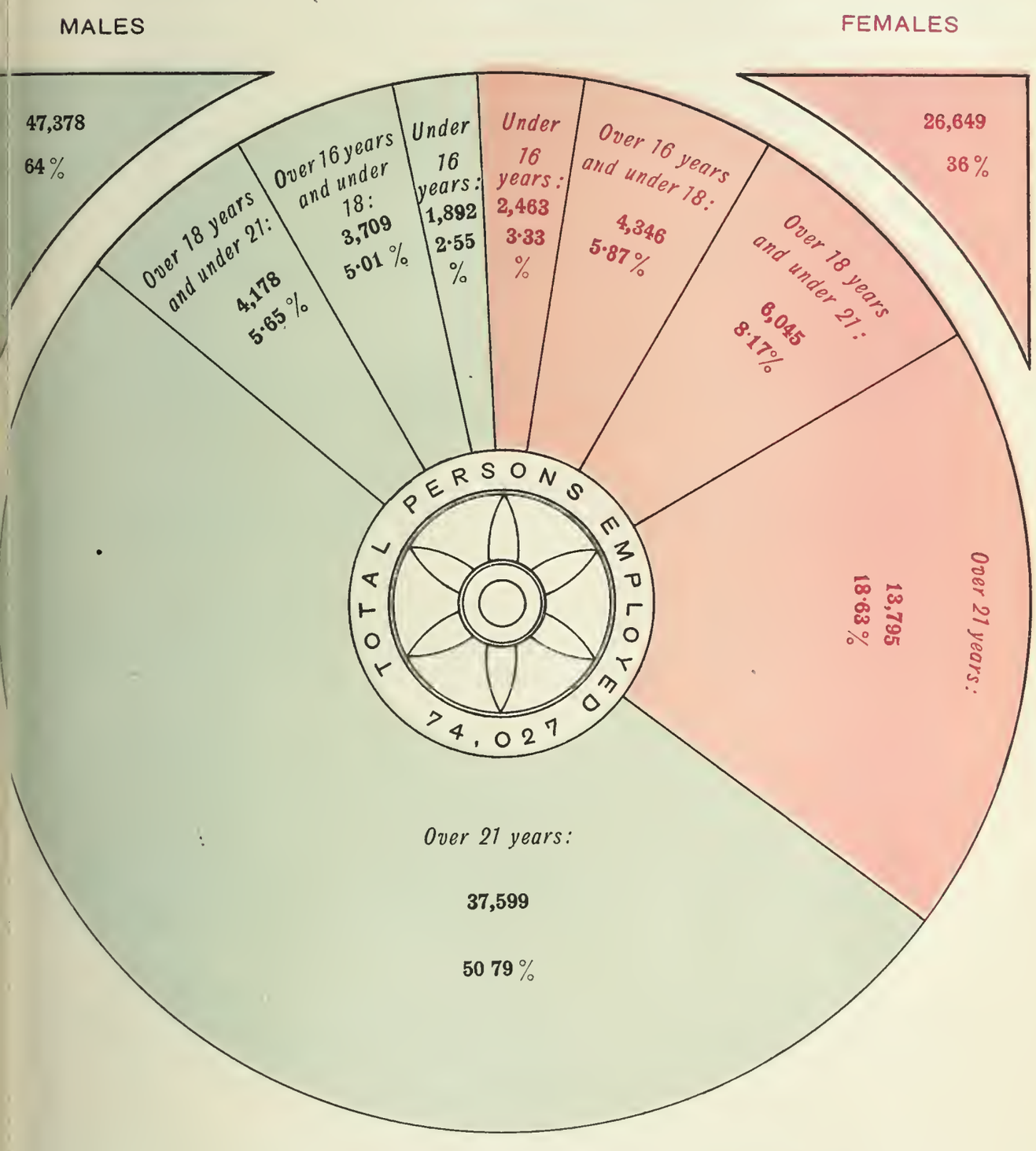
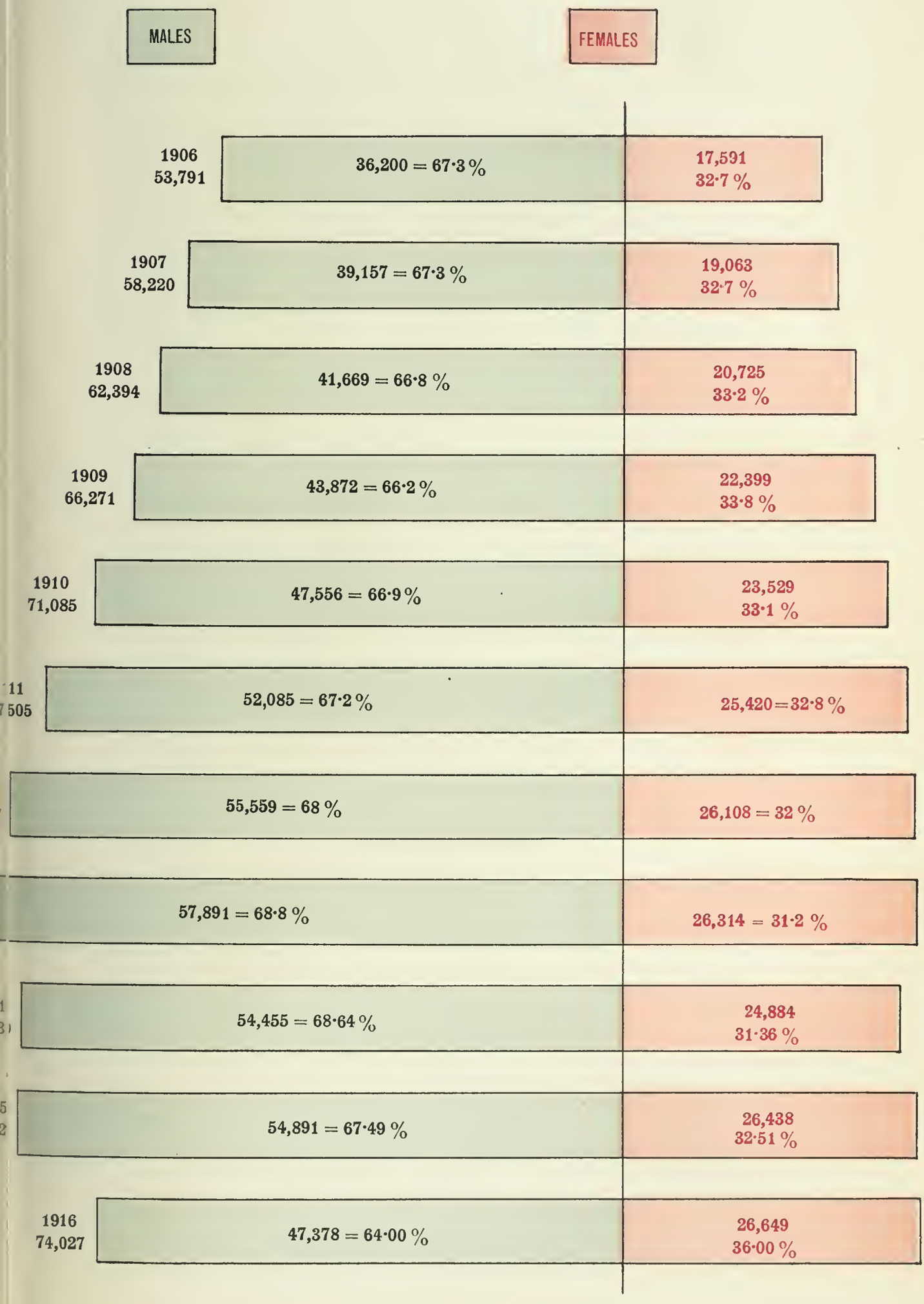


DIAGRAM B.

Showing Annual Totals and Percentages of Persons of each Sex employed in the Metropolitan District, 1906-1916.



but for 1914, 1915, and 1916 the percentage has slightly increased, although it has not reached that for 1909, as the following table shows :—

	Males under 16.	Females under 16.		Males under 16.	Females under 16.
1909 ...	3·17 per cent.	3·48 per cent.	1913 ...	2·24 per cent.	2·85 per cent.
1910 ...	2·8 „	3·13 „	1914 ...	2·37 „	2·90 „
1911 ...	2·6 „	3·1 „	1915 ...	2·86 „	3·13 „
1912 ...	2·3 „	2·95 „	1916 ...	2·6 „	3·3 „

Taking the males and females under 16 years of age collectively, there was a regular decrease during the period 1909 to 1913, but during the last three years the percentage has slightly increased, in 1915 and 1916 equalling that for 1910, but still below that for 1909, as the following table shows :—

	All persons under 18 years of age.		All persons under 18 years of age.
1909	6·8 per cent.	1913	5·1 per cent.
1910	5·9 „	1914	5·2 „
1911	5·8 „	1915	5·9 „
1912	5·2 „	1916	5·9 „

It is, I consider, very satisfactory to be able to record that out of a total of 74,027 persons employed in the Metropolitan District only 5·9 per cent. are under 16 years of age, when the age at which boys and girls may enter factories is as low as 14 years.

The Industry employing the greatest number of persons is clothing and textile fabrics, with 22,425, followed by food and drink, &c., with 11,409, and metal works, machinery, &c., with 8,488. These three classes account for 42,322 out of the total of 74,027, employed in all classes of factories in the Metropolitan District.

The following statement will show the increase or decrease in persons, males and females, from 1912 to 1916, inclusive :—

Year.	Persons employed.			Increase over previous year.			Percentage of Total Increase.	
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
							per cent.	per cent.
1906	36,209	17,591	53,791	2,763	1,844	4,607	59·9	40·1
1912	55,559	26,108	81,667	3,474	688	4,162	83·5	16·5
1913	57,891	26,314	84,205	2,332	206	2,538	91·9	8·1
1914	54,455	24,884	79,339	*3,436	*1,430	*4,866	*70·6	*29·4
1915	54,891	26,438	81,329	436	1,554	1,990	21·9	78·1
1916	47,378	26,649	74,027	*7,513	211	*7,302	.....	.....

* Decrease.

Table showing increase in number of factories and persons employed therein during the period 1897 to 1916 :—

Year.	Number of Factories.	Increase over previous year.	Persons employed.	Increase over previous year.
1897	1,673	.....	29,595	.....
1907	2,840	50	58,220	4,429
1908	3,142	302	62,394	4,174
1909	3,396	254	66,271	3,877
1910	3,670	274	71,085	4,814
1911	3,843	173	77,505	6,420
1912	3,989	146	81,667	4,162
1913	4,322	333	84,205	2,538
1914	4,579	257	79,339	*4,866
1915	4,758	179	81,329	1,990
1916	4,814	56	74,027	*7,302
Total increase.....		3,141 factories:—		44,432 persons.

* Decrease.

The individual reports of the Factory Inspectors will be found on subsequent pages

Newcastle District.

For statistical purposes, the Newcastle District will, in future, comprise the area north of the Hawkesbury River to Port Macquarie, west to Werris Creek, and south and south-east to Gosford, and a comparison of figures for subsequent years will be made with those for 1916 in respect of such area :—

Inspectors ... ... { F. A. Dunleavy. W. D. Clark. A. Waugh.

When the statistics were collected for the week ended 4th November, there were on the records of the Department 774 registered factories in the Newcastle District, employing 6,660 persons, 5,546, or over 83 per cent., of whom are males, and 1,114, or less than 17 per cent., females. Over 64 per cent. of the females employed in the Newcastle District are under 21 years of age, while less than 20 per cent. of the males are under that age. The large percentage of adult male employment is due to a great extent to the number employed at the steel and iron works of the Broken Hill Proprietary Co., Ltd., at Port Waratah, and at the Sulphide Corporation Works at Cockle Creek, these works, employing respectively 707 and 500 males over 21 years of age, or a total of 1,207. The reports of Inspectors Dunleavy and Clark upon the operation of the Act in the Newcastle District will be found on a subsequent page.

Broken

Broken Hill District.

The area of the Broken Hill district is that within the boundaries of the Municipality of Broken Hill (26 square miles).

Inspector ... ... A. G. P. Jackson.

On 4th November, 1916, there were 150 registered factories in the Broken Hill District on the records of the Department, employing 675 persons, 529, or 78 per cent., of whom are males and 146, or 22 per cent., females. This is a decrease of 6 factories and 139 persons, as compared with the figures for 1915.

Mr. Inspector Jackson's report will be found on a subsequent page.

Rest of State.

For statistical purposes the remainder of the State will not at present be divided into other districts, and the figures now furnished for 1916 will be the basis for the purposes of comparison with the figures for subsequent years in respect of the same areas.

In the remainder of the State, there were on 4th November, 1916, on the records of the Department 2,327 registered factories, employing 11,290 persons, of whom 10,442, or over 92 per cent., are males, and 848, or only 8 per cent., females.

Horse-power of Machinery.

The complete statistics of the horse-power of machinery used in factories was last collected at the end of 1914, prior to the provisions of the Factories and Shops Act being extended to the whole of the State, so that the figures now furnished cannot be used as a comparison with those for 1914.

At the close of the year 1916, 5,688 factories throughout the State were using machinery equal to 205, 285 horse-power.

In the Metropolitan Factories and Shops District, steam power amounted to 59,432, gas power to 10,137, and electric power to 39,098.

Statistics of the horse-power of the machinery in the various districts at the end of 1916 will be found on a subsequent page, and a reference to Diagram "C" will show the horse-power of the machinery in the Metropolitan District, and to what extent it has increased or decreased under the various headings of steam, gas, and electricity since 1906.

Employment of Children.

When the Minister for Labour and Industry, in December, 1909, decided that no girl under 14 years of age should be permitted to work in any factory, unless the circumstances of the home conditions were so extreme as to make her small earnings almost an absolute necessity, it was thought by some employers that the effect of this decision would operate somewhat harshly against girls who had acquired a fairly good education at, say, 13½ years. The records of the Department, however, prove that such was not the case, and whereas in 1909 the special permission of the Minister was sought and granted in the cases of 148 girls under 14 years of age to work in factories, in the following year it was found necessary to grant such special permission in only seven cases, and in no subsequent year up to and including 1915 did the number reach double figures. During the year 1916, special permission was granted in the cases of fourteen girls under 14 years of age, and in the seven years since the Minister's decision of December 1909 the total is only fifty-six, or an average of 8 per year. It is interesting to compare these figures with the total of the previous seven years, viz., 793, an average of 113 a year.

Certificates of Fitness.

Section 45 of the Act provides that medical certificates of fitness shall be obtained for all persons under 16 years of age before they may be employed in any factory in which steam or other mechanical power is used, and in certain other classes of factories prescribed by Regulations in which the manufacturing process is regarded as dangerous to the health of young persons. This is a very important provision, but unfortunately not regarded as such by some employers, who, in their desire to complete their staff, take on the boy or girl, and wait for a visit of the factory Inspector to discover that they have failed to obtain the necessary medical certificate of fitness.

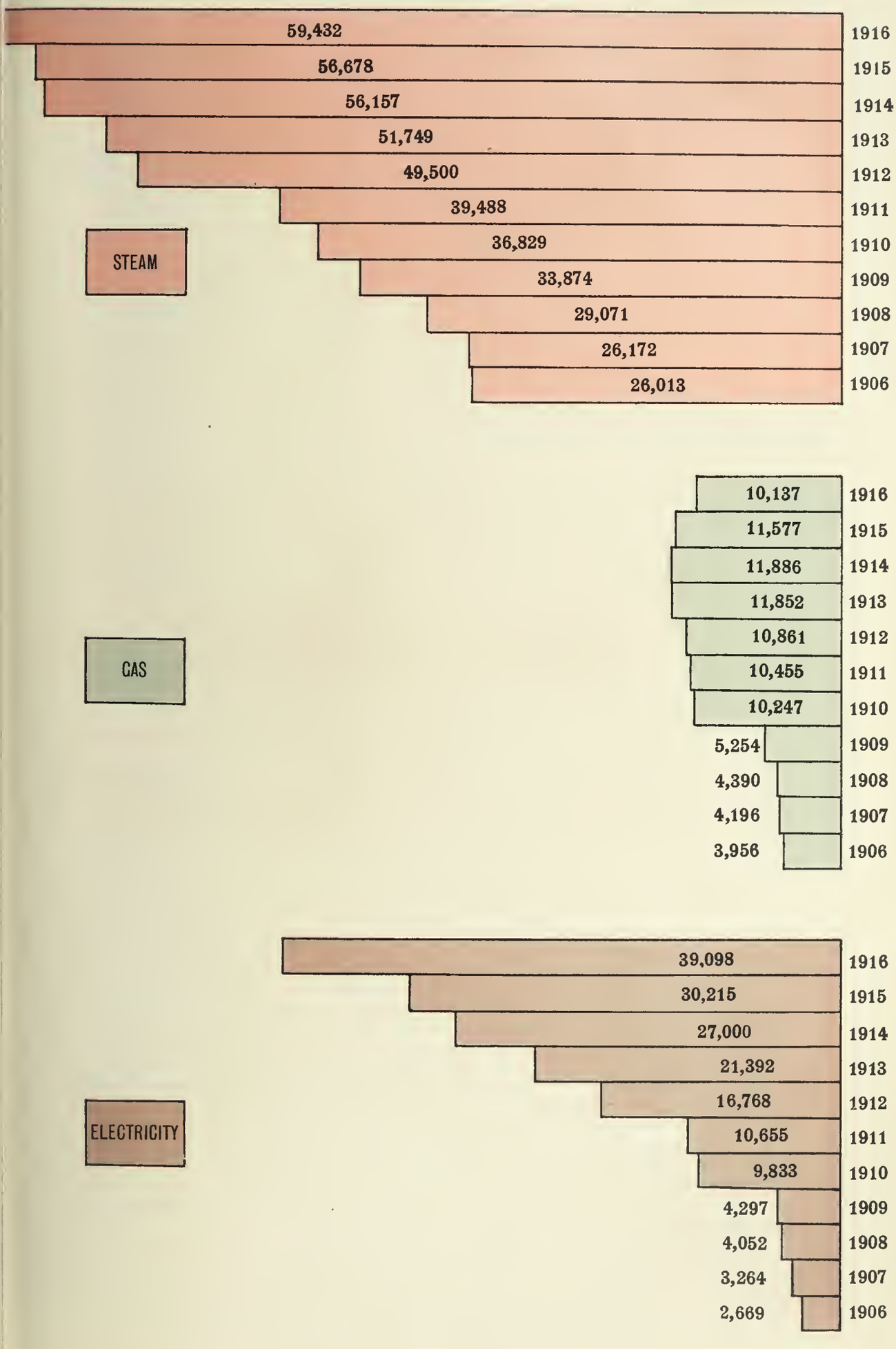
The Medical Officers of the Department of Health examine most of the children residing in the city and suburbs free of charge, but in the country districts a fee is charged for such examination, ranging from 2s. 6d. to 10s. It may be possible to arrange with the Department of Health for the examination of country applicants by the Government Medical Officers in country centres at a nominal fee of 2s. 6d., upon production of a form furnished by this Department accompanied by the necessary evidence of the child's age.

The following statement shows the number of cases in which special permission was granted by the Minister for boys and girls to work in factories during the last ten years :—

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1907.....	306	135	441	1912.....	154	4	158
1908.....	213	121	334	1913.....	160	9	169
1909.....	248	148	396	1914.....	152	8	160
1910.....	179	7	186	1915.....	143	6	149
1911.....	182	6	188	1916.....	162	14	176

DIAGRAM C.

Showing Horse-power used in Factories in the Metropolitan District: Steam, Gas, and Electricity, 1906-1916.



Certificates of Fitness and Permits to Work.

The following table shows the number of Certificates of Fitness and Permits to Work issued during the year 1916, and also the class of factory in which the children were to be employed ;—

Certificates of Fitness issued during 1916.

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Aerated waters	4	1	3	...	10	...	4	...	22
Artificial flowers	.....	43	...	...	...	...	...	...	43
Bedsteads, bedding	34	2	...	...	...	...	...	...	36
Biscuits	268	133	41	7	...	...	...	...	449
Bookbinding	3	169	...	...	...	...	...	...	172
Boots and shoes	154	213	...	...	...	...	12	9	388
Brass and copper	21	.....	...	...	...	...	...	...	21
Bread and pastry	33	2	4	...	2	...	7	...	48
Breweries	...	.....	2	...	...	...	1	...	3
Brooms	21	7	3	...	...	...	...	...	31
Calico bags	15	22	...	...	...	...	...	...	37
Chemicals and blue	52	71	...	...	...	...	3	...	126
Clothing	40	394	5	83	...	1	4	2	529
Coachbuilding	15	.....	3	...	...	...	2	...	20
Condiments	13	42	3	1	...	...	...	...	59
Confectionery	69	75	9	8	...	...	...	...	161
Dressmaking	6	428	...	20	...	...	...	...	454
Electric light and power	3	.....	1	...	...	...	1	...	5
Engineering	163	...	54	...	...	...	13	...	230
Flour mills	1	.....	...	...	...	...	6	...	7
Furniture	74	14	10	...	...	...	7	...	105
Glass and bottles	33	.....	...	...	...	...	...	...	33
Groceries and packing	98	39	1	3	...	...	...	...	141
Hats and caps	49	159	...	...	...	...	...	...	208
Hosiery and knitting	4	60	...	...	...	...	...	...	64
Ice and refrigerating	7	.....	9	...	1	...	3	...	20
Ironworks, stoves, &c.	39	.....	32	...	2	...	...	...	73
Jam	20	18	...	...	...	...	...	...	38
Jewellery	21	9	...	...	...	...	...	...	30
Kerosene and oil	6	1	...	...	...	...	...	...	7
Laundries	1	31	...	3	...	...	...	1	36
Leather bags, &c.	56	33	1	...	...	...	...	...	90
Marble and slate	1	.....	...	...	...	...	...	...	1
Meat-preserving	10	2	...	...	...	...	...	...	12
Motors and cycles	41	3	3	...	1	...	7	...	55
Musical instruments	22	3	...	...	...	...	...	...	25
Paper boxes	33	91	...	...	...	...	...	...	124
Paper mills	6	6	...	...	...	...	...	...	12
Plumbers and tinsmiths	80	.....	2	...	...	...	...	...	82
Potteries and brickworks	41	.....	1	...	...	...	3	...	45
Printing	364	63	15	1	7	...	10	5	465
Rope	9	.....	...	...	...	...	...	...	9
Rubber goods	16	31	...	...	...	...	...	...	47
Sawmills and joinery	165	1	29	1	1	...	14	...	211
Shirts	7	189	1	7	...	...	...	...	204
Smelting and ore works	16	.....	19	...	2	...	2	...	39
Soap, &c.	18	16	15	1	...	...	...	...	50
Tanneries	35	.....	...	...	...	...	1	...	36
Tents, &c.	6	10	...	...	...	...	...	...	16
Tobacco	70	78	...	...	...	...	...	...	148
Type-founding	11	10	...	...	...	...	...	...	21
Umbrellas	10	4	...	...	...	...	...	5	19
Wire works	26	.....	...	...	...	...	...	...	26
Woollen mills	56	87	...	...	...	...	...	...	143
Wool-scouring	13	6	...	...	...	...	...	...	19
Miscellaneous	42	17	2	...	1	...	...	...	62
Total	2,421	2,583	268	135	27	1	100	22	5,557

Special Permits.

The number of these permits issued during 1916 to children between the ages of 13 and 14 is 176, details of which appear below.

Child Labour in Factories during Year 1916.

District.	Permits granted.				Certificates of Fitness.	
	Special to children between 13 and 14 years of age.			Temporary to children between 14 and 16 years of age.	Issued.	Declined.
	Male.	Female	Total.			
Metropolitan	158	14	172	5,580	5,004	3
Newcastle	2	...	2	452	403	.....
Broken Hill	1	...	1	18	28	1
Rest of State	1	...	1	134	122	.....
Total	162	14	176	6,184	5,557	4

Particulars of Special Permits during Year 1916.

Date of Permit.	Permittee. Name.	Date of Birth.	Age.	Employment. Employer.	Locality.	Class of Factory.
			yrs. mos.			
3/1/16	Gough, John	11/3/1902	13 9	Continental Paper Bag Co., of Australia, Ltd.	Alexandria	Paper bags.
6/1/16	Caldecott, William	6/4/1902	13 9	Elliott Bros.	Balmain	Chemicals.
7/1/16	Quinlan, James	17/6/1902	13 6	John Sands, Ltd.	Sydney	Printing.
,,	Bell, Albert	12/3/1902	13 9	Colonial Sugar Refining Co., Ltd.	Pyrmont	Sugar refining.
,,	Dearing, Alphonse	13/5/1902	13 7	Penfold, W. C., & Co.	Sydney	Printing.
12/1/16	Stephen, Charles	14/4/1902	13 8	Ornamental Steel Mfg. Co., Limited.	,,	Ornamental steel.
13/1/16	Stephens, William	28/3/1902	13 9	Tullock's Phœnix Ironworks	Rhodes	Engineering.
,,	Casey, Hilda	12/2/1902	13 11	W. D. and H. O. Wills (Australia), Limited.	Kensington	Tobacco.
,,	Glover, Thomas	12/6/1902	13 7	Bennett, S.	Sydney	Printing.
18/1/16	McLachlan, John	2/7/1902	13 6	Simpson, R. N., & Co.	,,	Manufacturing stationery.
,,	Mullen, Marmaduke	31/3/1902	13 9	Hardman Bros., Ltd.	Newtown	Biscuits.
,,	Stanton, William	4/8/1902	13 5	Chick, Thomas	Petersham	Umbrellas.
,,	Bagot, Harold	2/2/1902	13 11	William Brooks, & Co., Ltd.	Sydney	Printing.
,,	Kruger, Francis	17/12/1902	13 1	Colonial Sugar Refining Co., Ltd.	Pyrmont	Sugar refining.
19/1/16	James, Albert	16/8/1902	13 5	Frank E. Moore	Sydney	Printing.
21/1/16	Blyton, Thomas	6/4/1902	13 9	Cohen and Sons, Ltd.	,,	Tailoring.
,,	Panley, Alfred	27/7/1902	13 5	G. A. Jones	,,	Printing.
,,	Wright, Thomas	26/2/1902	13 10	Smith, W. E.	,,	,,
25/1/16	Goodman, Thomas	11/9/1902	13 4	Bennett, S.	,,	,,
,,	Courtney, Patrick	19/5/1902	13 10	Rowlandson, A. Y.	,,	Engineering.
3/2/16	Burkins, Arthur	22/3/1902	13 10	Browning and Eyes	,,	Electrical engineering.
,,	Gates, Ernest	27/7/1902	13 6	Goodlet and Smith, Ltd.	Granville	Tiles.
,,	Copping, Charles	20/8/1902	13 5	Snelling Printing Works	Sydney	Printing.
4/2/16	O'Brien, Rita	24/3/1902	13 10	Chivers, Norman	,,	Underclothing.
5-2-16	Guion, Theo	20/9/1902	13 4	Newcastle Nut and Bolt Co.	Newcastle	Bolt and nut making.
9/2/16	Kelly, Stanley	2/5/1902	13 9	Fuerth and Nall, Ltd.	Sydney	Paper box making.
10/2/16	Brown, William	11/11/1902	13 1	Love, J. R., & Co.	,,	Tea packing.
,,	Stringer, Frank	17/4/1902	13 9	Elliott Bros., Ltd.	,,	Chemicals.
,,	Davis, Cecil	18/3/1902	13 10	Kitchen and Sons, Ltd.	Alexandria	Soap.
10/2/16	Ball, William	3/9/1902	13 5	Arnott, Wm., Ltd.	Homebush	Biscuits.
,,	Nelson, Ernest	15/9/1902	13 4	Ennever and Appleton	Sydney	Confectionery.
,,	Wade, William	7/5/1902	13 9	Arnott, Wm., Ltd.	Homebush	Biscuits.
,,	Ridvin, Thomas	8/10/1902	13 4	,, ,,	,,	,,
,,	Cohen, Benjamin	26/11/1902	13 2	Gordon, S., and Sons	Sydney	Shirt-making.
11-2-16	Waterhouse, Elizabeth	9/4/1902	13 10	Bull, Henry, & Co., Ltd.	,,	Millinery.
15/2/16	Burrill, Frederick	14/12/1902	13 2	Swan, R. C., & Co. Pty., Ltd.	,,	Brass foundry.
,,	Tucker, Owen	1/11/1902	13 3	Harper, R., & Co. Pty., Ltd.	,,	Grocery packing.
17/2/16	Baylis, Joseph	12/6/1902	13 8	Arnott, Wm., Ltd.	Homebush	Biscuits.
,,	Bennett, William	12/5/1902	13 9	Meadowbank Mfg. Co., Ltd.	Meadowbank	Railway carriages.
19/2/16	Harborne, Walter	31/1/1903	13 0	Arnott, Wm., Ltd.	Homebush	Biscuits.
,,	Dahl, Andrew	21/1/1903	13 0	Goodlet and Smith, Ltd.	Sydney	Sawmilling.
,,	Jeffcoat, Arthur	2/3/1902	13 11	Love, J. R., & Co.	,,	Tea-packing.
21/2/16	Henshaw, Ellen	11/5/1902	13 9	Firth, P. J.	Redfern	Cardboard boxes.
,,	Wake, Stanley	22/6/1902	13 7	Griffiths Bros. Pty., Ltd.	Sydney	Tea packing.
23/2/16	Rathbone, William	29/5/1902	13 8	Fowler, Robert	Camperdown	Pottery.
,,	Harris, Edward	31/5/1902	13 8	Love, J. R., & Co.	Sydney	Tea packing.
24/2/16	Pope, Albert	14/2/1903	13 0	Staveley & Co.	,,	Iron foundry.
28/2/16	Robson, Frank	14/4/1902	13 10	Andrew, J. & Co.	,,	Printing.
,,	Cooke, Frederick	20/1/1903	13 1	Vicars, John, & Co.	Marrickville	Woollen Mills.
,,	Ross, William	23/1/1903	13 1	Leigh, S. T., & Co.	Sydney	Printing.
,,	Hatherly, Raymond	18/4/1902	13 10	Wills, W. D., & H. O. (Aust.), Ltd.	,,	Tobacco.
29/2/16	Kidson, Matthew	14/10/1902	13 4	Grimley, Ltd.	,,	Saddlery.
,,	Molan, Thomas	1/4/1902	13 10	Hughes, Richard	Glebe	Canister making.
2/3/16	Leecourt, William	14/5/1902	13 9	Lysaght Bros. & Co., Ltd.	Five Dock	Wirenetting.
,,	Hodges, Frederick	1/5/1902	13 9	Blow, Mark	Sydney	Photography.
,,	Gray, Sydney	24/5/1902	13 9	Arnott, Wm., Ltd.	Homebush	Biscuits.
7/3/16	Pilford, Charles	12/11/1902	13 3	Sharp, J. B.	Balmain	Furniture.
,,	Payne, Arthur	7/10/1902	13 5	Hudson, G., & Sons, Ltd.	Glebe	Joinery.
,,	Maitland, Sydney	19/12/1902	13 2	Reid, Robt., & Co., Ltd.	Sydney	Clothing.
10/3/16	Biddlecombe, James	7/10/1902	13 5	Jones, G. A.	,,	Printing.
17/3/16	Swinfield, John	11/6/1902	13 9	Paxton, R. R.	,,	Clothing.
,,	Gardiner, Edgar	21/5/1902	13 9	Fallick, R. J. S.	Queanbeyan	Printing.
18-3-16	Todd, Bertram	3/5/1902	13 10	Smith, W. E.	Sydney	,,
23/3/16	Scudds, Basil	21/6/1902	13 9	Hicks, Son, and Watkins	,,	Boots.
28/3/16	Luck, William	23/4/1902	13 11	Aulsebrook and Sons, Ltd.	Camperdown	Biscuits.
29/3/16	Pogson, Lionel	8/11/1902	13 4	Ennever and Appleton	Sydney	Confectionery.
5/4/16	McDonald, Sydney	28/12/1902	13 3	Smith, W. E.	,,	Printing.
,,	McKee, James	26/9/1902	13 6	Martin, J., & Co., Ltd.	,,	Agricultural machines.
,,	Bucksath, Stanley	13/7/1902	13 8	Robertson, James	Annandale	Tinsmithing.
,,	Nichols, William	26/3/1903	13 0	Campbell and Kinsela	Sydney	Brushmaking.
7/4/16	Proops, Maurice	13/8/1902	13 7	Centennial Shoe Co.	Redfern	Boots.
10/4/16	Davies, William	15/12/1902	13 3	Christie, William	Sydney	Umbrellas.
,,	Vallender, Bertha	8/7/1902	13 9	Simpson, H., & Co.	,,	Shirts.

PARTICULARS OF SPECIAL PERMITS DURING YEAR 1916—*continued.*

Date of Permit.	Permittee.				Employment.		
	Name.	Date of Birth.	Age.		Employer.	Locality.	Class of Factory.
			yrs.	mos.			
12/4/16	Abello, Vincent	22/5/1902	13	10	Ludowici, Charles	Lane Cove	Leather belting.
13/4/16	Condon, Kathleen	7/1/1903	13	3	Vicars, J., & Co.	Marrickville	Woollen mills.
17/4/16	Jones, Donald	10/12/1902	13	4	Haynes, C. J.	Sydney	Printing.
19/4/16	Hardy, Alfred	30/12/1902	13	3	Adams, Frank	,,	,,
20/4/16	Stuart, Charles	8/8/1902	13	8	Bennett, Samuel	,,	,,
26/4/16	Erickson, Frederick	14/9/1902	13	7	Johnson, Percy	Arncliffe	Blacksmithing.
,,	Bryce, Victor	6/12/1902	13	4	Bennett, Samuel	Sydney	Printing.
,,	Little, John	8/12/1902	13	4	Robinson & Co.	,,	,,
2/5/16	Butler, Arthur	25/2/1903	13	2	Job, W. H., & Co.	Marrickville	Leather and boot polishes.
4/5/16	Williams, Wilfred	4/5/1903	13	0	Brent and Wilson	Sydney	Saddlery.
9/5/16	Brown, James	28/10/1902	13	6	Hughes, Walter	Glebe	Woodturning.
,,	Hutcheson, William	30/10/1902	13	6	Colonial Sugar Refining Co., Ltd.	Pyrmont	Sugar refining.
,,	Burns, John	1/10/1902	13	7	Wills, W. D. and H. O. (Aust.), Ltd.	Kensington	Tobacco.
,,	Routley, Charles	23/9/1902	13	7	Fairfax, John & Sons	Sydney	Printing.
10/5/16	Goodwin, Paul	17/7/1902	13	9	Gibbs, Cryer, & Co.	,,	,,
16/5/16	Weeden, Cecil	13/11/1902	13	6	Bennett, S.	,,	,,
,,	Rock, Neville	16/4/1903	13	0	Merchant and Traders' Association, Limited.	,,	,,
,,	King, Walter	10/2/1903	13	3	Wills, W. D. and H. O. (Aust.), Limited.	Kensington	Tobacco.
19/5/16	Burton, Edward	14/1/1903	13	4	Gow, Wm., and Son	Leichhardt	Wood-turning.
,,	Lawson, Lyla	9/12/1902	13	5	Taylor, Enoch & Co.	Botany	Boots.
22/5/16	Sheehan, Ernest	10/8/1902	13	9	Winn & Co.	North Sydney	Printing.
,,	Corrigan, Walter	17/9/1902	13	8	Olding, G. H.	Forest Lodge	Coachbuilding.
,,	Lawrence, W.	30/9/1902	13	7	Metters, F., & Co., Ltd.	Alexandria	Stoves.
25/5/16	Greeve, Ralph	26/9/1902	13	7	Atcherley and Dawson	Sydney	Tea packing.
31/5/16	Henderson, Una	12/8/1902	13	9	Spencer, Simpson and Mann, Limited.	,,	Paper bag making.
9/6/16	Pollock, Robert	6/1/1903	13	5	Abrams' Brooms and Brushes, Limited.	Glebe	Brooms.
28/6/16	McGowan, Harry	12/8/1902	13	9	Tomlin, J. W.	Sydney	Galvanised iron.
,,	Harrison, Audley	23/2/1903	13	4	Moore, F. E.	,,	Printing.
,,	Maguire, William	22/12/1902	13	6	Henderson's Sweets, Ltd.	,,	Confectionery.
30/6/16	Cleary, Arthur	3/12/1902	13	6	Wilson, Pechter & Co.	Alexandria	Boots.
3/7/16	Mitchell, Florence	25/8/1902	13	10	Australian Boot Factory	Sydney	,,
4/7/16	Aubin, Violet	15/11/1902	13	7	Sands, John, Ltd.	,,	Printing, &c.
10/7/16	Watson, Thomas	8/9/1902	13	9	Matthews, G. & Co.	,,	Condiments.
,,	Hafner, Cyril	6/8/1902	13	11	Arnott, W., Ltd.	Homebush	Biscuits.
10/7/16	Benson, Victor	1/9/1902	13	10	Crabbe, J. W., and Sons	Sydney	Tinsmiths.
11/7/16	Preece, Norman	2/9/1902	13	10	Dettman, W. A.	Arncliffe	Joinery.
,,	Bull, Cornelius	31/1/1903	13	5	Robertson, Jas.	Annandale	Tinsmiths.
,,	Munro, Arthur	28/8/1902	13	10	McMurtrie & Co., Ltd.	Sydney	Boots.
18/7/16	Griffiths, Edward	1/1/1903	13	6	Mauri Bros. and Thompson, Ltd.	,,	Corks.
,,	Pinkerton, John	2/11/1902	13	8	Wimble, F. T., & Co., Ltd.	,,	Printers' ink.
19/7/16	Simmons, Frederick	14/11/1902	13	8	Sandy, James, & Co.	,,	Glass bevelling.
21/7/16	Irvine, William	18/6/1903	13	1	*Bulletin* Newspaper Co., Ltd.	,,	Printing.
25/7/16	Greenwood, Frederick	18/9/1902	13	10	Pattinson & Co., Ltd.	,,	Manufacturing chemist.
27/7/16	Engels, Edwin R.	4/10/1902	13	9	Crabbe, J. W., & Sons	,,	Tinsmiths.
,,	Smith, Arthur	8/7/1903	13	0	Minahan Bros.	Newtown	Boots.
29/7/16	Mathews, George	2/3/1903	13	3	Stearns, F., & Co.	Sydney	Chemicals.
,,	Bradshaw, Frederick	19/11/1902	13	8	Sheffield Manufacturing and Plating Co.	,,	Electroplating.
,,	Garvan, Henry	22/3/1903	13	1	Tomlin, J. & W.	,,	Galvanised iron-worker.
1/8/16	Jenkins, William	12/7/1903	13	0	Griffiths' Bros. Pty., Ltd.	,,	Tea packing.
,,	Warton, Leslie	19/10/1902	13	9	Australian Woollen Mills, Limited.	Marrickville	Woollen mills.
,,	McLean, Daniel	3/4/1903	13	3	Sands, John, Ltd.	Sydney	Printing.
,,	Davies, William	9/11/1902	13	8	Fuerth and Nall, Ltd.	,,	Paper-box making.
,,	Hardie, Stanley	26/8/1902	13	11	Saywell and Sons (South Clifton Coal Mining Co.).	Scarborough	Coke-making.
,,	Pantlin, Walter	29/10/1902	13	9	Crabb, Harry	Sydney	Tinsmith.
2/8/16	Halliday, Edward	23/3/1903	13	4	Sands, John, Ltd.	,,	Printing.
5/8/16	Lynch, August	1/8/1903	13	0	Pogonoski, Reginald	Newcastle	,,
18/8/16	Bishop, Doris Ivy	3/10/1902	13	10	Limburg and Michael	Sydney	Clothing.
23/8/16	Truscott, Vivian	12/9/1902	13	11	Clyde Engineering Co., Ltd.	Clyde	Engineering.
26/8/16	Garvey, Thomas	14/5/1903	13	3	Bowen, L. J.	St. Peters	Boot-making.
30/8/16	Hoffman, Cecil	23/11/1902	13	9	Goodlet and Smith, Ltd.	Granville	Tiles.
5/9/16	Denison, Leslie	26/5/1903	13	3	Goodwin, J. C., & Co.	Sydney	Glass bevelling.
,,	Amorti, Raymond	30/8/1903	13	0	Arnott, Wm., Ltd.	Homebush	Biscuit-making.
,,	Davies, John	12/11/1902	13	10	Federal Match Co., Ltd.	Alexandria	Match-making.
7/9/16	Curran, Francis	13/5/1903	13	3	Sargent's, Ltd.	Sydney	Bread-baking.
,,	Greufell, Walwin	27/10/1902	13	10	Murdock's, Ltd.	,,	Shirt-making.
,,	Blacker, William	3/10/1902	13	11	Langdon and Langdon	Annandale	Sawmilling.
12/9/16	Whitfield, Cecil	15/10/1902	13	10	McMurtrie & Co.	Redfern	Boot-making.
,,	Hardy, Harold	11/2/1903	13	7	Sargent's, Ltd.	Sydney	Bread-baking.
18/9/16	Adams, Richard	6/7/1903	13	2	Aulsebrook and Sons, Ltd.	Camperdown	Biscuit-making.
19/9/16	Jenkins, Vernon	5/11/1902	13	10	Andrew, J., & Co.	Sydney	Printing.
20/9/16	Ratcliffe, Richard	20/2/1903	13	7	Cull, G., and Son	,,	Boot uppers.
,,	Donelly, Edward	22/1/1903	13	7	Cumberland Paper Board Mills.	Upper Lane Cove.	Paper boards.

PARTICULARS OF SPECIAL PERMITS DURING YEAR 1915—*continued.*

Date of Permit.	Permittee.			Employment.		
	Name.	Date of Birth.	Age.	Employer.	Locality.	Class of Factory.
			yrs. mos.			
23/9/16	Barnes, Ernest	30/3/1903	13 5	Bernard, D., & Co.	Sydney	Picture frames.
25/9/16	Deegan, Horace	23/7/1903	13 2	Little & Co.	Wollongong	Printing.
27/9/16	Blackhall, Cecil	25/9/1903	13 0	United Wire Nail Manufacturing Co., Ltd.	Pyrmont	Nail Manufacturing.
29/9/16	Connell, John	6/4/1903	13 5	Wolfson & Co.	Sydney	Boot making.
3/10/16	Nixon, Alfred	10/11/1902	13 10	Arnott, W., Ltd.	Homebush	Biscuits.
6/10/16	Everingham, Stanley	25/8/1903	13 1	.. .. ..	,,	,,
12/10/16	Walker, Austin	13/11/1902	13 10	Central Tailoring Co.	Sydney	Clothing.
,,	McGregor, Stanley	13/6/1903	13 3	Taylor, E., & Co., Ltd.	Botany	Boots.
,,	Galvin, Mary	24/11/1902	13 10	Ford, Sherington, Ltd.	Sydney	Steel trunks.
13/10/16	Wright, Oliver	17/12/1902	13 9	Hogbin, Coker & Co.	,,	Printing materials.
,,	Sheppard, William	1/4/1903	13 6	Exchange Printing Co.	,,	Printing.
17/10/16	House, Eric	4/6/1903	13 4	Hardman Bros., Ltd.	Newtown	Biscuits.
,,	Johnston, Christian	4/8/1903	13 2	Arnott, W., Ltd.	Homebush	,,
19/10/16	Cotterell, John	28/2/1903	13 7	Hudson, G., and Son, Ltd.	Glebe	Joinery.
4/11/16	Plumb, Arthur	17/2/1903	13 8	Samson Wire Manufacturing Co.	Camperdown	Wire netting.
6/11/16	Peters, Francis	10/10/1903	13 0	British Australian Tobacco Co.	Kensington	Tobacco.
,,	Cullen, Marjorie	3/1/1903	13 10	Simpson, H., & Co.	Sydney	Shirts.
8/11/16	Snowden, Alice	31/3/1903	13 7	McMurtrie & Co., Ltd.	Redfern	Boots.
9/11/16	Sutherland, Reginald	8/2/1903	13 9	Lever Bros., Ltd.	Balmain	Soap.
,,	Quine, William	10/6/1903	13 4	Deaton and Spencer	Sydney	Printing.
13/11/16	Lawrey, Alfred	28/4/1903	13 6	Martin and Bentley	Broken Hill	,,
20/11/16	Taylor, Alfred	7/1/1903	13 10	Wilson, Pechter, & Co.	Alexandria	Boots.
27/11/16	McCarthy, David	18/1/1903	13 10	Sheffield Manufacturing and Plating Company.	Sydney	Electro-plating.
11/12/16	Walker, Stanley	18/8/1903	13 3	Rose, Mark	,,	Clothing.
,,	Taylor, George	18/1/1903	13 10	Australian Building	Ashfield	Joinery.
14/12/16	Cassidy, Frederick	29/1/1903	13 10	Arnott, Wm., Ltd.	Homebush	Biscuits.
,,	Christiansen, Edward	12/3/1903	13 9	Elliott Bros., Ltd.	Balmain	Chemicals.
18/12/16	Treble, Edward	29/4/1903	13 7	Sydney Woollen Mills, Ltd.	Parramatta	Woollen mills.
,,	Houston, John	30/6/1903	13 5	Catholic Press Newspaper Co., Ltd.	Sydney	Printing.
21/12/16	Barr, Hugh	26/2/1903	13 9	Commonwealth Confectionery Co., Ltd.	Camperdown	Confectionery.
,,	Booker, Edward	12/4/1903	13 8	Peacock Jam Co.	Newtown	Jams.

ACCIDENTS IN FACTORIES.

The return of accidents is compiled to the end of the year, and shows that there were 438 accidents in the Metropolitan District, which fell within the provisions of Section 38. Seven accidents proved fatal, four in the Metropolitan District and three in the area referred to in this report as "the Rest of State."

Metropolitan District.

On 30th March, at the Australian Woollen Mills, Marrickville, a man aged 39 was killed through being crushed between "doffer" and "swift drum" of a carding machine. He was raking "fudd" (washed wool) from underneath drums by means of a hook handle. The "fudd" had apparently formed into strands, and deceased must have tried to pull the strands off the slipper wheel, when, through some cause, he lost his balance, and his sleeve being caught on the swift drum his head and shoulders were crushed between the drums, causing instant death. One witness stated at the inquest that he had had twenty-eight years' experience in woollen mills, both in England and Australia, and knew of no similar accident. A verdict of accidental death was returned.

On 24th October, at a tannery in Botany, a lad 16 years of age was caught in the shafting driving a fleshing machine, and had his right arm torn off above the elbow and both legs broken below the knees, death resulting from the injuries. Upon investigation, it was ascertained that a piece had been taken out of a belt, and the belt was being re-laced. The lad had gone upstairs, after the machinery had stopped running, to attend to the belting which was loose on the shaft, and he was called upon by another employee to put the belt on the hanger over the shaft, while the belt was being re-laced. The lacing was almost completed when the belt was jerked out of the hands of those lacing it. On looking up they saw the lad being whirled around the shafting. The shafting was guarded by a rail along the passage-way, and it was surmised that the lad got underneath the rail. A verdict of accidental death was returned.

At a sawmill in North Sydney, at 8 a.m., on 8th November, a man, aged 44, was caught in the main line of shafting and received injuries which resulted in his death. He was employed as an engine-driver, and it was part of his duties to start work at 7 a.m. and oil up ready for starting the mill at 7·30 a.m. He evidently had not finished the oiling at 7·30, as he was seen going up to the main line of shafting about 8 a.m. with his oil-can in his hand. It is surmised he was oiling one of the bearings and got caught in the

the belting. His body was found hanging by one leg on a cross-piece between two posts directly in line with the pulley, at a height of 12 feet from the ground. A verdict of accidental death was returned at the inquest.

At a sawmill in Glebe, at 7·45 p.m., on 9th November, a young man, 27 years of age, received injuries while working a circular saw, which resulted in his death. He was an experienced hand, and in charge of the works. The bench was fitted with a radial arm and roller feed, the saw ordinarily being used for re-sawing. As an experiment, deceased had fitted a second smaller saw on the spindle for the purpose of making two cuts in the one operation, cutting 4 in. by 2 in. oregon into 2 in. by 1 in. battens. A piece of batten broke and was picked up by the saw, and thrown forward, striking the man on the side of the head. A verdict of accidental death was returned.

Rest of State.

A coke-worker, aged 25 years, employed at the cokeworks at Eskbank, fell on to the flywheel on 28th July, and received injuries which resulted in his death. From inquiries it appears that he was paid off at 4 p.m. on Thursday, 27th July, and ordered off the works as he was under the influence of drink. He returned about 3 p.m. on the following day to draw payment for back money, and the Manager again ordered him off the works owing to his intoxicated state. When the Manager entered the office, deceased went into the engine-room and commenced playing a mouth-organ and dancing about, when he overbalanced and fell between the guard rail and the engine-room floor on to the flywheel. He was carried around on the wheel and received fatal injuries. A verdict of accidental death was returned. A second rail has since been provided and the space wire-netted.

On 1st August, at the Commonwealth Portland Cement Works, a man was unloading hopper coal trucks. It appears that, while lifting the bottom door, the bar he was using slipped and he staggered back and fell over the edge of the platform, a distance of between 10 and 12 feet. It was thought that his injuries were not serious. He, however, developed bronchitis, and died on the 8th August. It was the opinion of the jury that the accident accelerated his death. In a rider the jury recommended that a double railing be erected around the staging and this has been done.

On 5th October, at the works of the Oakey Park Coal Company, a lad 14 years of age received injuries which resulted in his death. He was employed as an elevator feeder on the ground-floor. He went up on to the first-floor where an electric motor drives an intermediate shaft, and whilst crossing over the shaft a chaff-bag, which he was wearing over his shoulders, was caught in the shafting, and whirled him around. Evidence was given at the inquest that the lad had been warned against going on to the first-floor, and a verdict of accidental death was returned, the Coroner stating that the poor lad's curiosity was evidently responsible for his death.

The following statements give the details of the number of accidents in the Metropolitan, Newcastle, and Broken Hill districts and the Rest of State, the description of the machine at which the accident occurred, and the extent of the injuries received :—

Metropolitan District.

Class.	Accidents resulting in injury to—						Fatal. Accidents	Total.
	Hands.	Arms.	Legs.	Feet.	Body.	Head.		
Bags and sacks	5	...	...	...	...	...	...	5
Boots and shoes	28	2	...	...	1	...	...	31
Brickworks	1	..	1	1	...	...	...	3
Chemicals	2	2	...	...	...	...	...	4
Coachbuilding	1	...	...	...	...	...	...	1
Engineering	48	5	1	1	3	5	...	63
Food and drink	42	9	...	2	2	1	...	56
Fur	1	...	...	...	...	...	...	1
Gasmaking	1	...	...	...	..	1	...	2
Hats and caps	3	1	...	...	...	1	...	5
Laundries	7	...	...	...	...	...	...	7
Leather	1	...	...	...	...	...	...	1
Metal Works	32	2	2	6	2	2	...	46
Oils and Grease	4	...	1	...	...	...	...	5
Printing	53	3	1	4	...	...	...	61
Papermaking	1	1	...	...	...	...	...	2
Ropeworks	4	...	...	...	...	...	...	4
Rubber Works	6	...	...	...	...	...	...	6
Stone, clay, and glass	...	...	...	1	...	...	...	1
Smelting	...	...	...	...	1	...	...	1
Tanneries	6	...	..	...	..	...	1	7
Tobacco	3	...	...	...	..	...	...	3
Woodworking	63	4	1	1	5	4	3	81
Woolscouring	2	1	...	...	...	...	...	3
Woollen mills	13	1	1	...	...	2	...	17
Miscellaneous	7	2	2	4	7	...	...	22
Total	334	33	10	20	21	16	4	438

DESCRIPTION of Machines at, and causes through, which Accidents occurred.

Bag and Sack Machines—	
Bag cutting	2
„ making	2
Sewing	1
Boot and Shoe Machines—	
Button-hole	1
Cutting press	10
Grindstone	1
Heel trimming	1
Heeling	2
Lacing	1
Levelling	1
Power Press	1
Sewing	1
Slugging	1
Skiving	2
Seasoning	1
Sole setting	1
Stamping	1
Tying	1
Brick and Tile Machines—	
Pipe	1
Engine	1
Chemical Machines—	
Mixing	1
Engineering and Metal-working Machines—	
Band saw	1
Barbed wire	1
Blower	1
Boring	1
Counter-sinking	1
Crimping	2
Drilling	3
Emery wheels	6
Flanging	1
Grinding	1
Guillotines	3
Lathes	14
Milling	2
Motor	1
Planing	5
Polishing	2
Power presses	13
Punching	2
Rivet cutting	1
Rivetting	2
Rolling	1
Seaming	1
Shaping	2
Shearing	1
Shank cutting	1
Stamping	6
Steam hammers	3
Stoking	1
Engineering and Metal-working Machines—(*continued*)	
Slotting	1
Swaging	1
Tin cutting	1
Tin forming	1
Toe puffing	1
Trimming	2
Food and Drink Machines—	
Bag cleaning	1
Biscuit	1
Bread making	1
Caskwashing	1
Chocolate mixing	1
Chopping	2
Closing	1
Conveyer	2
Crown Cork	2
Dividing	1
"Docker"	1
Dough mixing	2
Dough brake	2
Drying box	1
Flour sifting	1
Fruit peeling	1
Grinding	1
Ice saw	1
Malt grinding	1
Mincing	4
Packing	2
Paper shaving	1
Peel cutting	2
Rollers	4
Sausage	2
Sewing	1
Splitting	1
Syrup filling	1
Wafer	1
Gas Works—	
Conveyor	1
Punching	1
Fur machines—	
Fur-cutting	1
Hat and Cap Machines—	
Bumping	1
Fur-cutting	1
Shearing	1
Laundry Machines—	
Body ironing	1
Calenders	3
Mangle	1
Shirt and Collar	1
Leather Machines—	
Setting-out	1
Oils and Grease—	
Filter press	1
Plodding	1
Soap powder	1
Trimming	1
Paper Machines—	
Calender	1
Rollers	1
Printing and Cardboard Box Machines—	
Bag-making	1
Box-folding	2
Bronzing	1
Cheque book	1
Circular saw	1
Corner-staying	5
Creasing	1
Envelope	4
Folio cylinder	1
Guillotine	1
Labelling	1
Linotype	1
Power presses	2
Presses	6
Printing	4
Platens	9
Slotting	1
Varnishing	1
Wire stitching	10
Rubber Machines—	
Doubling	1
Mandrie	1
Wire stitching	3
Rope Machines—	
Carding	1
Drawing	2
Spinning jenny	1
Tanning and Woolscouring Machines—	
Cutting	2
Engine crank	1
Gilling	1
Leather-rolling	2
Revolving drum	1
Splitting	1
Wool-top finishing	1
Tobacco Machines—	
Cigarette	2
Pressing	1
Woodwork machines—	
Band saws	2
Boring	1
Circular moulders	3
Circular saws	33
Cross-cut saws	2
Frame saw	1
Jointing	11
Morticing	4
Planing	12
Sand papering	1
Shaping	5
Spoke-turning	1
Wood printing	1
Woollen Mills—	
Automatic feeder	1
Carding	4
Combing	2
Gilling	1
"Mule"	1
Riving	1
Weaving	5
Miscellaneous—	
Acid	1
Air Fan	1
Awl	1
Benzine	2
Blow Lamp	1
Block and tackle	1
Boiling liquids	14
Bursting bottles	2
Casting	1
Chute	1
Cranes	2
Electric current	2
Elevators	7
Flock machine	1
Fall	1
Furnace	1
Iron plates	3
Mill gearing	31
Millet cutting machine	1
Molten metal	12
Steam	1
Wetting machine	1
Total	438

EXTENT of Injuries received.

Fatal	4
Partially disabled—	
Loss of parts of fingers	54
Loss of fingers	29
Loss of arms	2
Loss of parts of arms	2
Loss of hands	2
Loss of toe	1
Loss of eye	1
Loss of foot	1
Broken Limbs—	
Broken fingers	5
Broken arms	6
Broken hand	1
Broken leg	1
Temporary—	
Cuts, lacerations, bruises—	
On hands	236
On arms	18
On body	13
On head	11
On feet	10
On legs	3
Burns, Scalds, &c.	35
Shocks	3
Total	438

Newcastle District.

Class.	Accidents resulting in injury to—						Fatal Accidents.	Total.
	Hands.	Arms.	Legs.	Feet.	Body.	Head.		
Brickworks	2	...	...	...	...	...	...	2
Engineering	8	1	1	...	3	...	...	13
Food and drink	5	1	...	...	...	1	...	7
Laundries	2	...	...	...	...	...	...	2
Metal works	...	...	...	1	5	...	...	6
Oils and grease	1	...	...	...	...	...	...	1
Smelting	1	...	...	...	1	...	...	2
Upholstering	1	...	...	...	...	...	...	1
Woodworking	17	...	2	...	1	2	...	22
Total	37	2	3	1	10	3	...	56

DESCRIPTION of Machines at, and causes through, which Accidents occurred.

- Brickworks—
  - Brick Press 1
  - Pipe Press 1
- Engineering Machines—
  - Bolt cutting 1
  - Drilling 3
  - Planing 1
  - Steam hammer 1
  - Stone crusher 1
  - Straightening 2
- Food and Drink Machines—
  - Bottle filling 1
  - Corking 1
  - Dough brake 1
  - Electric Pump 1
  - Engine 1
  - Mincing 1
- Laundry Machines—
  - Collar Ironing 1
- Oils and Grease Machines—
  - Stamping (soap) 1
- Smelting Machines—
  - Shaker screen 1
- Upholstering Machines—
  - Teasing 1
- Wood-working Machines—
  - Band saws 4
  - Circular saws 9
  - Jointing 1
  - Moulding 1
  - Planing 1
- Woodworking—*continued.*
  - Spindle 2
  - Spoke moulding 1
- Miscellaneous—
  - Bursting bottle 1
  - Crane 1
  - Furnaces 3
  - Hot ashes 2
  - Mill gearing 7
  - Molten metal 1
  - Sulphuric acid 1

Total 56

EXTENT of Injuries Received.

- Partially disabled—
  - Loss of parts of fingers 7
  - ,, fingers 4
  - ,, arm 1
- Burns, scalds, &c. 7
- Temporary (cuts, lacerations, and bruises)—
  - On hands 25
  - ,, arms 1
- Temporary (cuts, lacerations, and bruises)—*continued*)—
  - On legs 2
  - ,, head 3
  - ,, body 4
- Broken Limbs—
  - Broken Leg 1
  - Broken finger 1

Total 56

Broken Hill.

Class.	Accidents resulting in Injury to—						Fatal Accidents	Total.
	Hands.	Arms.	Legs.	Feet.	Body.	Head.		
Wood-working	1	.....	.....	.....	.....	.....	.....	1
Total	1	.....	.....	.....	.....	.....	.....	1

DESCRIPTION of Machines at, and causes through, which Accidents occurred.

- Wood-working Machine—
  - Circular saw 1

EXTENT of Injuries received.

- Partially disabled—
  - Loss of part of thumb 1

Rest of State.

Class.	Accidents resulting in Injury to—						Fatal Accidents.	Total.
	Hands.	Arms.	Legs.	Feet.	Body.	Head.		
Cement	.....	.....	.....	.....	.....	.....	1	1
Coal and coke	1	.....	.....	.....	1	.....	1	3
Food and drink	1	.....	.....	.....	.....	1	.....	2
Engineering and metal	1	2	1	2	5	2	1	14
Woodworking	4	.....	.....	.....	.....	.....	.....	4
Woollen mills	1	.....	.....	.....	.....	.....	.....	1
Miscellaneous	.....	.....	.....	.....	1	.....	.....	1
Total	8	2	1	2	7	3	3	26

DESCRIPTION of Machines at, and causes through, which Accidents occurred.

- Food and Drink Machines—
  - Corn crusher 1
- Engineering and Metal-working Machines—
  - Drilling 2
  - Shearing 2
  - Lathe 1
- Wood-working Machines—
  - Band saw 1
  - Circular saw 1
  - Shaping 1
  - Planing 1
- Woollen Mills—
  - Weaving loom 1
- Miscellaneous—
  - Cement block 1
  - Coal skip 1
  - Coke chute 1
  - Explosion 1
  - Fall 1
  - Hot iron 5
  - Mill gearing 4
  - Steel bar 1

Total 26

EXTENT of Injuries received.

- Fatal 3
- Partially disabled—
  - Loss of parts of fingers 2
- Broken limbs—
  - Broken leg 1
  - Broken jaw 1
- Burns, scalds, &c. 4
- Temporary (cuts, lacerations, bruises)—
  - On hands 6
  - On arms 2
  - On feet 2
  - On head 2
  - On body 3

Total 26

Order under section 41, and the Fencing and Guarding of Machinery.

The operation of the Minister's Order under Section 41, whereby boys under 16 years of age, and females, are prohibited from working at certain machines described in such Order as dangerous, has resulted in increased activity both on the part of the factory inspectors and employers in devising safety appliances of such a character as to render some of these machines sufficiently safe for females to be employed thereat, and I should like to see the order carefully reviewed for the purpose of ascertaining whether the restrictions therein placed upon certain machines could not be conditionally released with the view of permitting females over 18 years of age to work thereat. Power Presses of the lighter description while doing certain classes of work can now be so effectively guarded as to make them reasonably safe for females to operate, and as, under these circumstances, the work is not otherwise unsuitable for females, they should not, I consider, be excluded from this channel of employment. There are some machines, such as Lock Seaming Machines, Trimming Machines, Dummy Wiring Machines, &c., at which women have always been employed, and which, with ordinary care, are reasonably safe for females to operate, which should not be confused with the machines described as Power Presses in the Minister's Order.

Prior to the issue of the Minister's Order, women had operated Hydro-Extractors in laundries, and, although under certain conditions, these machines would very properly be regarded as dangerous, they can, I believe, now be made sufficiently safe to justify the Minister in approving of some relaxation of the Order in respect thereto. I am informed that in a very short time there will be a machine imported which will prove reasonably safe for women to operate, and if this be so, the safety gear can be affixed to other machines not already similarly guarded.

There is still the same necessity for constant supervision in regard to the efficient fencing and guarding of machinery and the maintaining of such fencing and guarding. Operators frequently remove the guards which have been specially provided for their protection, and neglect to replace them when next operating the machines. While I believe that many accidents would be avoided by the exercise of a little more care on the part of the employees, there is still room for improvement in the class of guards provided by some employers, and should the Minister be disposed to any conditional relaxation of his Order under Section 41, those employers must understand that there will have to be a vast improvement in their method of guarding before they will be entitled to any special consideration by the Department.

Overtime in Factories.

A great amount of overtime was worked during the year, especially in those factories which were engaged in the manufacture of supplies for the Commonwealth Defence Department.

Permission was granted by the Minister for Labour and Industry for the working of additional overtime in terms of Section 43, in the cases of thirty factories, affecting 6 males and 369 females. The following statement shows the class of factory in which the additional overtime was worked :—

Factory. Class.	No.	Employees.	Factory. Class.	No.	Employees.
Bedding	1	4	Knitting	1	1
Boots	2	19	Laundry	1	24
Clothing	1	30	Paper Boxes	2	†5
Condiments	1	5	Photography	2	5
Confectionery	2	*21	Printing	9	93
Furs	1	3	Stationery	1	6
Hats	1	36	Tobacco	1	70
Jam	4	53			

* Including 1 male. † Males.

The following schedule contains a summary of the notifications of overtime received by the Department during the year 1916 :—

Industry.	Notified Overtime. Cases.	Persons. Males.	Females.	Aggregate Hours.
Aerated waters	28	5	30	834¾
Artificial flowers	11	.....	167	469¾
Bags and sacks	54	34	1,195	3,517
Bedding and upholstering	9	.....	56	144½
Biscuits	145	247	881	3,230¾
Blue, blacking, &c.	29	5	1,189	2,392
Bookbinding	15	15	98	339
Boots and shoes	414	453	4,100	8,056¾
Boxes and packing cases	55	42	255	757
Bread and pastry	102	7	588	1,563
Brushes	11	.....	59	147½

Industry.	Notified Overtime.			
	Cases.	Persons.		Aggregate Hours.
		Males.	Females.	
Badges and medals	10	.....	40	112
Cardboard boxes	25	3	282	701
Carpets	27	.....	262	586½
Cereal foods	7	.....	101	303
Chemicals and drugs	190	143	711	2,372½
Clothing (men's)	325	93	6,134	15,622½
Clothing (women's)	202	15	1,837	4,149½
Clothing (waterproof)	35	.....	797	2,074½
Condiments	72	27	526	1,652¼
Confectionery	208	151	2,479	7,427½
Cornflour and oatmeal	5	.....	62	186
Corsets	43	.....	204	443½
Drapery	13	4	169	479½
Dressmaking and millinery	386	34	3,973	9,965¾
Dyeing and cleaning	26	2	292	320
Florists and seedsmen	17	.....	43	86
Flour mills	1	.....	2	2
Food and drink	20	1	151	378¾
Furriery	97	.....	382	1,009
Glue and gelatine	15	.....	29	73¾
Grocery packing	2	.....	26	52
Hats and caps	278	57	3,856	11,020
Hosiery and knitting	131	3	1,196	3,287¾
Jam-making	336	181	6,620	16,333¼
Jewellery	80	.....	228	546½
Laundries	210	19	2,382	5,275
Leather goods	59	25	282	944¼
Mantles	5	.....	22	60½
Meat preserving	3	.....	31	7[illegible]¾
Motors and cycles	16	16	84	250
Optical instruments	2	.....	13	23½
Other works	8	.....	80	200
Paper bags and boxes	27	63	281	988
Perfumes and essences	32	.....	118	342
Photography	231	53	1,134	3,162¾
Picture frames	16	1	31	91¾
Printing	1,187	1,191	7,582	25,117¾
Quilt-making	14	.....	305	764½
Rubber goods	45	1	612	1,672¼
Saddlery	9	.....	21	5[illegible]¾
Shirts, ties, &c.	75	.....	514	1,425½
Soap and candles	17	.....	249	663
Stationery	2	2	2	12
Sugar Refining	9	9	.....	27
Tailoring (men's)	413	70	5,352	13,791½
Tailoring (women's)	161	71	1,097	2,899
Tanning	3	.....	14	31
Tea packing	119	40	848	2,621
Tents and tarpaulins	66	67	603	1,976½
Tinsmithing	3	7	4	33
Tobacco and cigarettes	155	405	7,558	23,369¾
Umbrellas	12	.....	65	175
Underclothing	60	.....	429	1,073½
Wigmaking	1	.....	3	7½
Wines and spirits	46	31	135	427
Woollen mills	251	468	8,210	17,78[illegible]¾

Fire Escapes in Factories.

Special attention is still being given to this very important matter, and valuable assistance is rendered to the Department by the Chief Officer of Fire Brigades and his staff.

During the year 98 reports were received from the Chief Officer of Fire Brigades that means of escape had been provided in premises in the city, suburbs, and country which fulfilled the requirements of Section 39 of the Factories and Shops Act.

Boiler Regulations.

On 10th March, regulations dealing with the inspection of boilers in factories were published in the *Government Gazette*. These regulations provide that every steam boiler, digester, vat, jacketed pan, tank, cylinder, vessel, or other machine which contains or is intended to contain steam, air, or other gas under pressure, in any factory shall be inspected within six months of the gazettal of the regulations, and thereafter at least once in every twelve months. Inspections shall be made by persons who must be approved by the Minister as competent to inspect and carry out all duties pertaining to the application of the regulations.

A report by the Departmental Engineer upon the operation of the regulations to 31st December will be found on a subsequent page.

Prosecutions.

During the year there were 224 informations laid for various breaches of the Factories and Shops Act; convictions were obtained in 199 cases, eleven being dismissed, and fourteen withdrawn.

The following are details of the convictions :—

Metropolitan District.

Section	7.—Being in occupation of an unregistered factory...	7 cases.
,,	11.—Obstructing an Inspector	1 case.
,,	14.—Failing to exhibit time sheet, &c.	6 cases.
,,	20.—Failing to keep premises in a cleanly state ...	9 ,,
,,	33.—Failing to fence mill-gearing, &c.	20 ,,
,,	34.—Failing to fence dangerous machinery	2 ,,
,,	38.—Failing to report accident	13 ,,
,,	40.—Employing children under 14 years without permission	2 ,,
,,	41.—Employment at prohibited machine	1 case.
,,	42.—Employment for over five hours without interval	2 cases.
,,	43.—Breaches of overtime provisions	54 ,,
,,	44.—Employment in restricted part of factory ...	1 case.
,,	45.—Employment of persons without certificates ...	15 cases.
,,	49.—Employment outside hours of furniture factory	4 ,,
,,	56.—Failing to comply with order	3 ,,
,,	58.—Allowing son to be employed contrary to Act...	1 case.
,,	68.—Failing to pay tea-money	2 cases.
Regulation	15.—Insufficient w.c. accommodation	5 cases.
,,	16.—Insufficient lavatory accommodation	5 ,,
,,	19(18).—Failing to keep approach to fire-escape clear	1 case

Newcastle District.

Section	33.—Failing to fence mill-gearing, &c.	8 cases.
,,	34.—Failing to fence dangerous machinery	6 ,,
,,	38.—Failing to report accident	1 case.
,,	40.—Employing child under 14 years without permission	1 ,,
,,	43.—Breaches of overtime provisions	1 ,,
Regulation	16.—Insufficient lavatory accommodation	1 ,,

Rest of State.

Section	7.—Being in occupation of an unregistered factory...	5 cases.
,,	20.—Failing to keep premises in cleanly state ...	2 ,,
,,	33.—Failing to fence milling-gearing, &c.	14 ,,
,,	43.—Breaches of overtime provisions	2 ,,
,,	44 —Employment in restricted part of factory ...	1 case.
,,	45.—Employment of person without certificate ...	1 ,,
,,	56.—Failing to comply with order	1 ,,
Regulation	15.—Insufficient w.c. accommodation	1 ,,
	Total	199 cases.

Conclusion.

In conclusion, I desire on behalf of the Officers of the Department, to thank the Department of Public Health, the Chief Officer of Fire Brigades and his staff, the Inspector General of Police, the City and Suburban Municipal Councils and other bodies who have so readily assisted in securing a reasonable compliance with the provisions of the Factories and Shops Act and Regulations.

Report of P. A. Fildes, Departmental Engineer, Factories and Shops Act, 1912.

Boiler Regulations.

Administrative activities under the Factories and Shops Act, 1912, were considerably enlarged by the making of regulations, gazetted 10th March, 1916, under section 62 of the Act, which had for their object the securing of safe conditions in the construction and use of steam boilers and other pressure vessels installed in factories.

The regulations are broadly on the lines of those operating in Great Britain; the most important features being:—

1. The determination and approval by the Engineer of the Department of the number and types of safety valves that must be provided on steam boilers.
2. The insistence that water gauges must be protected, and that two test cocks must be fitted.
3. The necessity of providing a stop valve to every steam outlet from a boiler, excepting to safety valves and mounting or fitting connections.
4. The requiring of a shut-off cock between the check valve and boiler.
5. The fitting of fusible plugs to all internally fired boilers.
6. A reducing valve and pressure gauge on the low pressure side of any steam supply system furnishing steam to any vessel or machine working at a pressure lower than that generated or contained in a steam boiler or other appliance supplying the higher pressure steam.
7. Persons inspecting boilers whether as individuals or as representatives of Insurance Companies or Associations, must obtain the Minister's Certificate of Approval as to their competency to make inspections.
8. A specification card, to be lodged with the Minister giving particulars and dimensions in respect of every boiler in a factory, and of any boiler it is proposed to erect or install in a factory.
9. Authority is vested in the Engineer of the Department, and any inspector appointed under the Factories and Shops Act holding the Minister's Certificate of Approval, to at any time make inspections and examinations of boilers and other pressure vessels, notwithstanding any action that may already have been taken by an accredited inspector not being a Departmental Officer.

Appointment of Inspectors.

Applications for the Minister's Certificate of Approval under Clause 5 were received from all parts of the State. A high standard of qualification was demanded before favourable recommendation was made, and only in cases where no doubt existed as to the applicant's capabilities to undertake the necessary investigations and calculations to ascertain the stresses and safe working pressures in the appliances subject to the regulations was the approval granted.

Provisional Certificates of Approval were granted in the first place. These had force and effect for a period not exceeding six months from the date of execution. Upon the completion of the period named, the holders of the provisional certificates made application for a renewal of their authority, and if, after investigation, the Minister was satisfied that each applicant had faithfully carried out the duties imposed upon him, a renewal certificate, without any time limit qualifications, was granted.

The persons whose names appear hereunder are those to whom provisional and renewal certificates had been granted between the 10th March, 1916, and the 31st December of that year.

The names appear in three groups, comprising persons resident in Sydney and suburbs, Newcastle and district, and country centres respectively.

Certificate No.	Name.	Address.
	Sydney and Suburbs.	
27	*Armstrong, A. H.	Edinburgh-road, Willoughby.
34	Arnott, W.	9 Clover-street, Mosman.
48	Auldjo, L. C.	7 Victoria-street, Ashfield.
91	Ausburn, C. H.	39 Hawthorn-parade, Haberfield.
3	*Banyard, T. R.	Inspector, Queensland Insurance, Pitt-street.
84	Bennet, T. C.	Department Labour and Industry.
17	*Bernard, Thos.	17 Cambridge-street, Drummoyne.
9	*Berry, J. H.	39 Pitt-street, Sydney.
43	Brown, C. J.	St. George's Crescent, Drummoyne.
62	Chapman, Graham	Clara-street, Erskinville.
64	Cheesewright, S. E.	Avoca-street, Randwick.

* Renewal Certificate also granted.

Certificate No.	Name.	Address.
	Sydney and Suburbs—continued.	
21	*Connie, P.	40 Pitt-street, Sydney.
28	*Davis, C. E.	Daniel-street, Granville.
92	Duncan, J.	Clark-street, Kogarah (Queensland Insurance).
53	Elder, Wm.	8 Edward-street, Peacock's Point, Balmain.
19	*Fielder, J.	Inspector, Queensland Insurance Co.
49	Fox, F. C.	Albyn-road, Strathfield.
63	Gitzdahl, O. L.	32 Charlecot-street, Dulwich Hill.
2	*Gregory, R.	Equitable Buildings, George-street.
61	Grosse, G. C.	29 Avona-avenue, Glebe Point.
57	Guthrie, A.	Dunmore-street, Bexley.
79	Hargreaves, R.	Burfitt-street, Leichhardt.
31	*Hastie, J.	Inspector, Department Labour and Industry.
38	Hastie, J. N.	47 Henson-street, Summer Hill.
52	Hopkins, E. J.	47 Druitt-street, City.
51	Horn, R.	Bent-street, North Sydney.
96	Houghton, T. H.	63 Pitt-street, Sydney.
29	Hunter, A. H.	65 Macleay-street, Darlinghurst.
95	Kidd, Hector	c/o Anthony Hordern and Sons.
20	*King, P. R.	School-parade, Marrickville.
1	*Lawson, J.	Chief Engineer, Queensland Insurance Co., Ltd., Pitt and Bridge streets, Sydney.
8	*Macartney, J.	64 Pitt-street, Sydney.
22	Mason, H. D.	35 Pitt-street, Sydney.
28	*Massey, G.	Post Office Chambers, Pitt-street.
39	McDonald, T. W.	"Tuthra," Ranger's-road, Mosman.
5	*McLardy, J. R.	Broderick-street, Balmain.
51	McSwiney, John	"The Laurels," Green-street, Cremorne.
86	Membrey, H. A.	Clyde Engineering Works.
44	Mitchell D.	14 Bayswater-street, Drummoyne.
10	Mitchell, S. M.	Mercantile Mutual Insurance Co., 120 Pitt-street.
77	Morrison, A.	Pearson-street, Balmain East.
12	*Nicoll, George	The Crescent, Homebush.
41	Olding, A. C.	c/o Chapman & Co., Darling-street, Balmain.
68	Oliver, R. K.	McPherson-street, Neutral Bay.
36	Pickering, G. H.	Inspector, Department Labour and Industry.
40a	Pritchett, R. W.	56 Margaret-street, Sydney.
67	Rawson, Charles	32 Jamieson-street, Sydney.
6	Reid, Cosmo	Glasgow-street, Balmain.
24	*Rodgers, A.	41 Arundel-street, Glebe.
42	Rodgers, S. D.	c/o G. and C. Hoskins, Ltd., Wattle-street, Sydney.
37	Rowland, Wm.	9 Rosedale-street, Petersham.
67a	Salmon, Norris	84 Hunter-street, Sydney.
45	Savage, J.	169 Darley-street, Enmore.
30	Scott, Jas. J.	10 Alma-street, North Sydney.
23	Sinclair, John	30 Glenden-road, Double Bay.
85	Sinclair, J.	Ballast Point road, Balmain.
89	Smith, J. M.	Peacocks Point, Balmain.
58	Stobo, S. E.	The Boulevarde, Strathfield.
88	Stowe, F. E.	26 Hunter-street, Sydney.
15	Tate, A. S. W.	Queensland Insurance Co., Pitt-street.
66	Thompson, J. Sted	25a Pitt-street, Sydney.
3	*Thornley, T. W.	Queensland Insurance Co., Pitt and Bridge streets.
13	Totolos, A.	166 Prince-street, Sydney.
16	Treffone, D.	42 Bucknell-street, Newtown.
46	Vyle, Chas.	14 Jones-street, Pyrmont.
69	Westcott, H.	Shirley-road, Wollstonecraft.
99	Wicks, G. V.	Anderton-street, Marrickville.
14	*Wildridge, R.	76 Pitt-street, Sydney.
83	Williams, A.	Department Labour and Industry.
	Newcastle and District.	
56	Dick, James	Lawson-street, Hamilton, Newcastle.
74	Dick, Wm.	Hamilton, Newcastle.
104	Ellis, R. G.	Kerr-street, Mayfield.
31a	Lowrie, J. A.	c/o Broken Hill Proprietary Co. Newcastle.
87	Morison, D. N.	Carrington, Newcastle.
11	*Rodgers, J. E.	Newcastle.
73	Taylor, A.	Russel-road, New Lambton.
47	Webb, H. J.	c/o Morison and Bearby, Newcastle.
	Country Centres.	
75	Allen, J. A.	Spooner-street, Lithgow.
40	Boa, Andrew	Foley's-road, Lismore.
76	Clarkson, E. J.	Portland.
100	Clegg, W. E.	Station-street, Cowra.
55	Costello, H.	Edward street, Orange East.
33	Coutts, H. K.	Town Hall, Goulburn.
59	Fraser, Hector	Quirindi.
82	Harrison, G.	Kinghorn-street, Nowra.
78	Isaacs, A. R.	Broadwater, Richmond River.
35	Jones, C.	Port Kembla.
80	Laing, Thos.	North Araluen.
93	Kirkwood, D.	Brewarrina.
59	Mathews, T. B.	Broadwater, Richmond River.
70	McAlpine, J.	Victoria-street, Taree.
94	McRoberts, H. A.	Harwood Island, Clarence River.
101	Miller, Geo.	Pulganbar.
25	Mead, Arthur	Spring Hill.

* Renewal Certificate also granted.

Certificate No.	Name.	Address.
	Country Centres—continued.	
18	Moore, Robt. M.	Dubbo.
72	Oag, James	Harwood.
26	*Parker, E.	Hassan's Walls road, Lithgow.
90	Parsons, H. W.	North Araluen.
98	Ratcliffe, J. R.	Illewong.
103	Sharp, J. W.	Keira-street, Wollongong.
60	Smiles, Wm. C.	Condong, Tweed River.
71	Smith, E. W.	Coff's Harbour Jetty.
32	Smith, T. F.	Shire Chambers, West Wyalong.
81	Vidler, H. E.	Hill street, Scone.
97	Thompson, F. W.	Tenterfield.
102	Wood, E. H.	Ballina.
65	Woodley, E. H.	Tarce, Manning River .

* Renewal Certificate also granted.

Complaints.

Two complaints regarding action taken by accredited inspectors were made during the year. Both were thoroughly investigated. The circumstances and subsequent action taken were as follows :—

1. Direct and implied representation was made by an inspector to several factory occupiers to the effect that he, the accredited inspector, held certain statutory powers similar to the authority vested in an inspector appointed under section 5 of the Factories and Shops Act, 1912, and that he had the right of entry into any factory, and to inspect any boiler or pressure vessel therein used or installed.

   The person charged eventually admitted that he permitted it to be inferred that he was a State employee. Due consideration having been given to the facts, the renewal of his certificate was withheld by the Minister.

2. Two officers of an Insurance Company who were also accredited inspectors, had made examination of some soda water cylinders used in shops, and represented to one shopkeeper that these appliances, pursuant to the regulations, had to be inspected. Investigation disclosed the fact that these appliances were not within the scope of the regulations, and the company upon being so informed, immediately and frankly admitted the error, and made all reparation required by the shopkeepers concerned. An undertaking was also given by the Chief Engineer of the Company that in the case of any doubt arising in future appertaining to the scope of the regulations, immediate reference would be made to the Minister.

Inspection Records.

From the date of gazettal of the regulations to 31st December last, 3,210 boilers and other pressure vessels were inspected, and specification cards and report forms as prescribed were properly completed and lodged with the Minister. Of that number 2,220 related to steam boilers and 990 to pressure vessels other than steam generators, as follows :—

Boilers :—

Marine	18	Watertube	354
Dry-back marine	12	Jackass	26
Multitubular	237	Lancashire	82
Cornish	155	Cast-iron sectional	23
Vertical	494	Wolf	3
Colonial	614	Unclassified steam generators	3
Locomotive (including portable traction engines and road roller boilers)	199		2,220

Pressure Vessels :—

Jacketed pans	443	Vegetable steamers	13
Cylinders (presses, dryers, drying drums and heaters)	127	Triple effect	1
Receivers (air and hot water)	122	Copper coil heaters	10
Digesters	80	CO^2 cylinders	6
Hot tables (flat cantilever, autoclave presses and tables)	65	Montejus	9
Dessicators	7	Steam heaters	11
Retorts	19	Saddle backs	1
Vulcanizers	23	Evaporators	2
Calenders (mangles, steam-heated rolls)	35	Sterilizers	1
		Stills	6
			990

Total 3,210

Accredited inspectors acting on their own behalf inspected 1,219 of the 3,210 steam boilers and other pressure vessels; the remaining 1,991 appliances were inspected by accredited inspectors employed by Insurance Companies. In respect of prescribed

forms

forms lodged under the latter conditions they were, in addition, and pursuant to the regulations, signed by the Chief Engineer of the Company concerned.

An analysis of the foregoing particulars and figures is embodied in the following table :—

Inspections made by—	Number Vessels Inspected.	Percentage
Queensland Insurance Co., Ltd.	1,683	52·43
New Zealand Insurance Co., Ltd.	99	3·08
Mercantile Mutual Insurance Co., Ltd.	77	2·40
Liverpool London and Globe Insurance Co., Ltd.	49	1·52
Commercial Union Assurance Co., Ltd.	45	1·40
United Insurance Co., Ltd.	33	1·02
Royal Insurance Co., Ltd.	3	·09
Insurance Company of Australia, Ltd.	2	·06
Accredited Inspectors acting individually	1,219	38·00
Total	3,210	100·00%

It was required by the regulations that every steam boiler or other pressure vessel in a factory should be inspected within six months of the gazettal date, and thereafter inspected at least once in twelve months. It is gratifying to record the fact that a large majority of factory occupiers immediately observed their statutory obligations, and in many instances evidenced an anxious desire to do so. In cases where inspection was not effected by the prescribed date, letters calling for an explanation of the default were addressed to the persons concerned, the replies to which were substantially satisfactory. Where ignorance of the existence of the regulations was the excuse proffered, the occupier was in clear terms given to understand that his default was seriously regarded and that inspection and full conformity with the regulations was an immediate necessity. In every such case the law was forthwith complied with, and the appliance which formed the subject of the Department's representations was brought into conformity with requirements.

Appended is a table indicating the practical results following upon the application of the boiler regulations, covering the period of nine months ending 31st December, 1916. Under specific headings are given boilers, &c., discarded and put out of commission, as the outcome of Inspectors' directions, new and additional mountings, fittings, repairs, alterations, and other safety devices, together with the percentage between the number of appliances affected, and the total number inspected.

Vessels Discarded.

Boilers :—	
Vertical	23
Colonial	7
Loco. type	2
Cornish	8
Portable	3
Marine type	3
Multitubular	3
Jackass	2
Total	51
Other Pressure vessels	14
Total	55

Fittings, &c.

Fittings, &c., Ordered and Completed.	Inspected Vessels on which Fittings, &c., ordered and completed.	Percentage.
	No.	
Boilers (2,220)—		
Guards and casings for locking existing safety valves	672	30·27
Gauge-glass protectors	907	40·85
Test cocks	393	17·70
Cocks between check valves and boiler, and boiler and stop valves on steam connections.	569	25·63
Fusible plugs	312	14·05
New pressure gauges	64	2·88
Isolating valves	13	·58
Expansion joints	5	·22
Patches	145	6·53
Miscellaneous repairs	795	35·81
Other Pressure Vessels (990)—		
Reducing valves	68	6·86
New safety valves	786	24·48
Boilers and other Pressure Vessels (3 210)	4,729	

Under the heading "Patches" and "Miscellaneous repairs," are included very many instances where gross weakness existed in the appliances concerned, which, unless remedied, would constitute an ever present hazard.

The number of boilers discarded indicates that one in every hundred inspected was found to be in a highly dangerous condition and beyond repair. Such boilers were rightly condemned as being a standing menace to the operatives and others whose employment and duties brought them into proximity therewith.

The recorded reports of boiler and steam vessel explosions in other countries show that the disasters are not associated with any particular type of steam generator or container, and dire results involving severe loss of life and damage to property follow upon the failure of low pressure vessels as well as those carrying high pressure, irrespective of the size or type of the appliance.

In cases where additional inspections or examinations are made over and above those prescribed by the regulations, copies of reports made to the factory occupiers were required to be lodged with the Department. In this connection 450 external and 209 internal examination and inspection reports have been received in respect of 659 boilers and other pressure vessels.

Upon investigation pursued directly, action was taken, through accredited inspectors, to secure alterations and additions to approximately fifty steam boilers and many pressure vessels.

Original perquisition was made in respect to aerated water machine cylinders, for the reason that an analysis of the first data received disclosed an exceedingly low factor of safety. Tests of these cylinders, which are of copper, were made under pressure, and the tensile stress and strain were accurately determined. The results obtained indicated that such vessels were in many cases worked at and above the elastic limit of the material used in their construction. The question of "safety" or "relief" valves to these appliances also received close consideration. In the operation of these aerating machines it is necessary that different pressures be applied to the various cordials to secure their proper impregnation with carbonic acid gas. A pressure gauge and a non-lock-up screwdown relief valve were usually attached to the machine. This type of valve lent itself to abuse, as the compression spring could be screwed down to such an extent that more or less dangerous conditions would obtain. As a result of my representation two manufacturers have designed a new type of lock-up valve which permits of adjustment to no more than the maximum safe pressure, corresponding to that of the cylinders. The valves have been approved and adopted.

Weaknesses in design and construction were also apparent in the rectangular vessels used for cooking tinned goods. References were made to me regarding these appliances by several accredited inspectors, and the investigations and calculations which were made gave clear evidence that the vessels were grossly overloaded at their then working pressures. The action subsequently taken resulted in appropriate stiffening angles or tees being riveted to the weak surfaces. Hydrostatic tests applied before and after the alterations were made justified the measures taken.

Several propositions involving the use of the oxy-acetylene process to boiler repairs have been submitted by accredited inspectors for consideration and approval. Prior to the making of the regulations a large second-hand multitubular boiler was extensively repaired, the oxy-acetylene process being used during the operations; later an intimation was received that the boiler was to be installed in a country factory. Strenuous objection was taken to this plan, and the boiler has since been condemned, and I understand will not again be used. Refusal was also given to apply this method of repair to a vertical boiler in the top shell plate of which an extensive crack had developed. A complete and thorough repair was made by providing a new uptake and a gavet connecting the uptake to the shell end.

A definite stand has been taken in respect of autogenous welding as applying to boiler and pressure vessel work, and in this connection my attitude has been based upon the determinations of the Board of Trade as set out in the circular of Instructions to Surveyors (No. 1,532), and the more comprehensive rules of the United States Department of Commerce.

Mr. Superintending Inspector W. Armitage reports:—

The general conditions of factories are still improving. And yet, notwithstanding their strictness, the Act and its regulations are still not far reaching or strong enough for some employers. While we have in our midst splendid instances of detailed provision for the comfort of employees, there are still firms making large profits who will not provide proper wash basins, or even spend money on limewashing and painting.

In the city a large patent medicine firm went into occupation of a building that had been used as a pickle and condiment factory. This firm expected the girls to wash their hand in a sink that was also used for washing the bottles and paste pots. After being fined, they lime-washed the factory, and conditions are now much more sanitary than they had been during the first six months of occupation.

I cannot say that conditions in the country are deserving of much praise. The condition of the rear of some of the country stores and shops was disgraceful.

I had to prosecute in connection with one of the larger stores in my country district, and the evidence given *re* sanitary conditions is not fit for publication in the report.

Machinery.—The protection of machines needs constant attention. A decision of the State Full Court and an appeal to the High Court, decided in February last, go a long way to making the work of the inspector easy.

It is more than ten years since I had the first saw-guard made and tried. The opposition then used against it has died. Since its introduction there have been no very serious accidents when the guard was used, but when the guard was not used there have been fatal accidents. The cross-cut pendulum saw has been the cause of some nasty accidents. In these instances the employer was always under the impression that the workman drew the saw on to his body, but I found out that it was caused by the saw biting on the wood when the cut jams, and the saw jumps the cut, and travels forward on to the man's body. To overcome this, I have had a stay rod provided, so that the overrun of the saw can be checked.

The chief complaint that I have is that, often, though guards are provided, they will not be maintained in an efficient state. The same applies to the fencing of machinery.

Accidents.—One very bad accident occurred in my district. A man had been twenty years at a large printing machine. While inking a piece of paper which he used to do while the machine was running, his arm was torn off, and but for the guard rail, his head would have been crushed between the rollers. He said that he had taken the risk, and did it every day until at last he was caught.

Another accident already referred to was when the saw overran the bench and came on to the man, and lacerated his body severely under his arm. Some years ago a similar accident happened, which resulted in a man having his abdomen cut open; hence the stay rod has been suggested above.

A peculiar accident, which gives some idea of trench conditions, happened when two men were asphyxiated at Balmain. They were removing ashes from a spoil heap; the outer crust had formed a seal to the chemical gases generated by the ashes of the refuse from the destructor. These men were some feet away from the heap when it slid down, and the gases were liberated. The fumes overcame the two men, and both were killed by the fumes. All this occurred on the water front in the open air, and in a very short space of time.

Fire Escapes.—I discovered that the following is a method in practice among Sydney architects, calling tenders for a fire escape, giving a drawing of the landings, but no dimensions or weight of metal, and simply stating that it had to satisfy the inspectors of the department. The result is, that in some of the steel fire escapes I have been asked to examine, the oscillation has been as much as 2 inches. The live load and strain were never taken into calculation by the contractor or the architect. When questioning the occupiers on their safety factor, I found that they were quite ignorant of the necessity for regard being paid to this factor. I should suggest a more common standard in the building of fire escapes and a safety factor of four.

Some of the old fire escapes should, in my opinion, be reviewed, with the object of bringing them up to the present standard of safety.

MR. SUPERINTENDING INSPECTOR W. I. TAYLOR reports:—

Little alteration has been made during the past twelve months in the general condition of factories. A few new factory buildings were completed, and in other instances removals to a better class of premises took place, but the tendency has been in almost all cases to economise as much as possible, and expenditure in the direction of premises and plant has practically been limited to cases of necessity. The internal sanitary conditions of factories has received due attention, and many improvements have been made with regard to lighting, ventilation, closet accommodation, and repair work.

The standard of safety in the fencing of machinery has been maintained in the various factories, and although it was found necessary in some instances to prosecute, employers generally have met the requirements of inspectors. Efforts are being made to obtain efficient safety appliances for parts of machinery which, although dangerous, are now subjected to very limited protection. The outlook for the success of these efforts is hopeful.

In a number of instances approved means of escape in case of fire have been provided, and in others fire-escapes are in course of erection.

Of the accidents which happened in my district, the following are most noteworthy:—

At a fairly large timber yard a man had his leg broken through his becoming entangled in some belting. He was employed in the yard as an "orderman," and wanting a piece of timber dressed, he attempted to "put on" the belt of the dressing machine, with the intention of doing the work himself, in the temporary absence of the machinist. The belt slipped on the shaft pulley and caught on a "key," and his

leg

leg became entangled in it as it was being gathered by the shafting. He was unable to free himself, with the result that his leg was pulled on to the shafting and fractured. Fortunately for him another employee, noticing the accident, ran to the engine and stopped the machinery, thereby preventing more serious injury.

In all large boot factories heeling machines are used for nailing heels on boots in one operation. These machines are operated by adult machinists, who are assisted by boys. The boys' work is very light, viz., that of putting the necessary number of nails in the perforations of a "palm" which is put in and out of position by the machinist, and the nails are driven into the heels by a "driver" operated by the machinist. Whilst employed at one of these machines a boy, who usually stands at the side of the machine, had part of his thumb crushed by being struck by the back part of the "driver." When asked why he had put his hand on that part of the machine the boy said: "I was looking round, and did not notice what I was doing." The part of the machine by which he was struck was practically the full stretch of the boy's arm from where he was standing.

In a large furniture factory, a young man lost his right hand. All the machines in this factory are well protected, and, in addition, a dust exhaust system has been installed. In some instances the attachment of the exhaust to a machine provides an additional protection to the employee. In this instance the machine was a panel planer, fitted with the usual hood-guard for the face of the machine, and on the back the bonnet of the dust exhaust made a complete cover to the cutters. In explaining how the accident happened the injured man told me that he had lifted the exhaust bonnet out of position, and whilst standing in front of the machine put his hand over the cutter hood to free some shavings, and his hand came in contact with the cutters, with the result that he lost his right hand. I examined the machine very shortly after the accident; it was in good working order, as also was the exhaust. Had he stopped the machine before removing the "bonnet" the accident could not have happened.

A girl had a narrow escape from serious injury in a boot factory. She was working at a machine bench, and something fell on the floor and rolled under the rods which are affixed for protecting the dresses from being caught on the shafting which runs under the bench. She must have stepped over the rods, and overbalanced, and fell on the shafting. Her apron was caught, and she was pulled in. Quick "throw off" gear was immediately manipulated, and the girl escaped with a "shock."

In the "stereo" room of a large newspaper office, one of the employees, in getting the "casting box" ready, had not properly adjusted the back gauge," consequently, when the molten metal was poured into the "box," it ran out of the "leak" on to his legs and foot, causing severe burns.

The occupier of a furniture factory had been visited on several occasions by inspectors, and had been given instructions *re* the fencing of his machinery. On making an inspection I found that a number of items of machinery were quite unfenced, and in some instances in dangerous condition. I gave him specific instructions, and on visiting subsequently to ascertain if the instructions had been carried out, found the machine in practically the same condition as on my first visit. Proceedings were taken and he defended the case, but the magistrate convicted, and he was fined £5 and costs. He then made application for a remission of the fine; his application was not granted.

In a large mill the machinery was in a very unsatisfactory condition as regards fencing, some highly dangerous parts being fully exposed. As this occupier had received definite instructions on previous occasions, he was proceeded against, and a penalty of £5 and costs was imposed.

The occupier of a canister factory was proceeded against for not having a part of dangerous machinery securely fenced. The evidence showed that the machine in question was operated by a female, and when properly fitted was a safe machine to work. The operation of the girl was to "feed" the machine, for which purpose a feed slide is attached to the machine, and the tins automatically run into their proper position. In these circumstances there is no danger to the operator. For some reason, about which I was unable to get definite information, the foreman removed the feed slide, leaving the knives of the machine fully exposed, and the girl under his direction operated the machine without the "feed" slide. This was a most dangerous operation, and to use the occupier's words, "It was like feeding the machine over razor edges." A conviction was obtained, and a penalty imposed.

On a visit to the Riverina district, I found that several occupiers had disregarded the instructions previously given. Informations were laid, and in all cases convictions obtained, the penalties ranging from 20s. to 60s. The prosecutions were mainly for unfenced machinery.

Mr. Senior Inspector Burkitt reports:—

Owing to my absence from duty for some five months during the year, the inspection of factories in my district has not received as much attention as one could wish, though I visited the whole of them at least once, and have to report that, with few exceptions, the requirements of the Act have been well observed. In only one case was it found necessary to prosecute at my instance, and this was for failing to provide a fire escape within the time allowed.

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Of the accidents which came under my notice one, unhappily, proved fatal, and this was not of a nature which required a written notice, under section 38, of the occurrence, to be furnished to the Department. It was caused by a large quantity of clay falling on, and completely burying, a man, who was engaged in loading a cart with clay from the bottom of a pit, which had been sunk to a depth of some 25 feet on the premises of a tile factory, for the purpose of obtaining material for the manufacture. Expert evidence given at the inquest proved that the sinking of the pit had been carried out in an unscientific manner, inasmuch as instead of the walls being left with a batter or slope, they were practically perpendicular, and the danger was enhanced in this case by the very small superficial area of the excavation. Two accidents occurred at jointing machines, one of which resulted in the loss of three fingers and a portion of a fourth, and the other in the amputation of the tops of three fingers. In each case a guard of the old type was provided, but not properly adjusted by the operator. This kind of guard is thoroughly effective if properly used, but owing to its construction, it has to be frequently adjusted to suit the size or shape of the timber to be treated. The manager of the factory at which one of these accidents occurred was, at the time, having a new guard made for the machine from a design sent from England, a model of which he subsequently had made for the Department. It forms a most effective protection from the knives, which, by means of shields operated by springs, are completely covered, except the portion actually in use. This is somewhat similar to another guard for this very dangerous machine, which has been in use for some time. A very serious accident happened to a little girl less than 15 years of age, who had only been employed in the factory for a few days. It occurred at a printing press, and resulted in the amputation of her hand. She was engaged in "flying off," *i.e.*, removing sheets of printed cardboard as they came from the machine—a perfectly safe operation in itself, but by some means she had her hand caught between the cylinder and the type. This is not regarded as a dangerous machine, but the case goes to prove the inadvisability of employing very young people at machinery, at least until they have been in the factory for a period sufficiently long to enable them to observe others at the work.

The collection of models of machinery guards now being made by the Department should prove of great value, as inspectors frequently find that explanations of new devices of this nature are apt to go in at one ear and out at the other, whereas an opportunity to inspect a working model is almost sure to be availed of.

Senior Inspector Miss Annie Duncan reports:—

The work of the year 1916 has been largely taken up, as usual, with the routine work of inspection. In reviewing its operations, it is found to consist for the most part of a perpetual endeavour to lift the standard of general comfort and cleanliness, as is indicated by the large number of orders issued to occupiers to attend to details of better upkeep in the factory, to limewash the whole or part, to add to the number of sanitary and lavatory conveniences, or to improve them in some way by better ventilation or by more effective screening of approaches. In the nature of things, work of this kind can never be finished and done with, as there are constant fluctuations of numbers in factories.

The question of overcrowding is no longer a matter calling for constant supervision as in the earlier days of the administration, as many of the smaller dressmaking establishments have gone out of existence, and the newer buildings are designed for workrooms with a due regard to the provisions of the Factories and Shops Act. The manufacture of women's clothing is also now carried on, to a very large extent, in factories where power-driven machines are installed, instead of in small workrooms with treadle machines.

This year, as in previous ones, the principal trouble has arisen in old buildings which cannot be readily adapted to modern requirements, but which are not bad enough to be condemned. In one or two cases I have had some delay in getting improvements executed because of disputes between the owner and the occupier of the building, but, on the whole, occupiers of factories carry out reasonable instructions willingly and without undue delay.

I was surprised to meet with opposition on the part of a factory manager to my order to provide seats for the employees. As their work is done standing all day at a high bench, I insisted upon the regulation number of seats being provided to enable the women to have a few minutes' rest occasionally, but immediately on this being done, a complaint was sent to the Department that the employees were not allowed to use them, and, although the manager denied this, it was obvious that his compliance with the order was carried out in the letter more than in the spirit.

In the matter of certificates of fitness for young persons under 16 years of age, prosecutions were undertaken in some cases because the circumstances showed evidence of carelessness on the part of the occupiers. As a rule, failures to comply with this section are traceable to the neglect of some person to whom has been delegated the duty of attending to the matter, and they are generally isolated cases occurring in factories where most of the young people are duly provided with their certificates.

The great war in which our nation is fighting for its existence has reacted upon the work of factory inspection in many directions.

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The clothing trade has been well occupied during the year in the manufacture of military clothing of all sorts. Many places have been temporarily registered as factories which have only been occupied during the currency of a contract. This has been done to facilitate the work of inspection by the Ordnance Department, and to enable them to control subcontracting, which is forbidden by the terms of contracts.

A large jam factory had the greatest difficulty in executing a very large contract for the military authorities, in consequence of the breakdown of new machinery specially installed for the purpose of coping with the rush. The contract was estimated on a certain daily output during the ordinary working hours, but all calculations were upset by the difficulty of getting the machines into smooth running order, and in the end concessions in the matter of overtime were made by the Minister, in order to enable the firm to get out their consignments in time to take advantage of such shipping facilities as offered.

The woollen mills have been hard at work in the effort to provide enough cloth for military clothing, and contractors frequently had their factories laid idle because of the want of cloth, and at such times had great difficulty in holding their staff of employees together.

In November the coal strike caused much temporary dislocation of industry, and, in common with other inspectors, I made many inquiries as to the number of persons thrown out of employment by the want of motive power in factories. Occupiers of factories went to considerable expense in installing oil engines in anticipation of a long strike, and a few were fortunate enough to be independent of the municipal electric supply. The Christmas holidays following closely upon the ending of the strike, work was not immediately resumed everywhere, and some people took advantage of the opportunity to limewash their factories.

During the year special attention was paid to the guarding of carding and forming machines in felt hat factories, in order, as far as possible, to eliminate danger to the feeder.

In company with the men inspectors, I visited the various factories in which new guards of different types were being fitted, all of which were an improvement on existing guards, but some of which needed further adjustment.

The improvement in the guarding of dangerous machines is so great of late years that at any moment a machine, which has hitherto been regarded as dangerous, may be converted into one which is practically safe. Where mechanical power is used it is difficult to eliminate the element of carelessness on the part of the operator, especially where young and inexperienced persons are allowed to operate machines to which they are unaccustomed, without proper supervision; but experienced and careful women have been known to work certain dangerous machines without mishap for many years. The matter is largely one of level-headedness and experience, and as all machines are labour-saving devices, it is highly desirable that safeguarding shall be brought to the highest possible pitch of perfection, so that their use may be more universally available.

Mr. Senior Inspector J. Hastie reports:—

Generally speaking, the sanitary conditions of factories are improving, and although the effect of the war has been to interfere with the progress of the building trade, with the result that very few new factory buildings have been erected, the older buildings have been benefited by necessary improvements in the way of sanitation and ventilation.

With the fencing of machinery there is always opportunity for an inspector to develop or design some new guard or fence for a part of machinery, the necessity for which is shown when inquiry is made into an accident, and it is found that the probability of an accident is much greater than would be reasonably supposed. The erection of additional plant in factories also shows the necessity of continual inspection, for it is often found that, in discarding an old or obsolete machine and replacing a modern one, and in altering the position of a machine, the erection of the necessary fencing has been omitted.

Inspector Miss L. A. Brown reports:—

During February I was engaged on inspections at Newcastle.

At Tighe's Hill I found a large soap and candle factory with an insufficient number of wash-basins provided for their employees. I was shown some basins which they were supposed to use, but they were in such a condition as to be practically useless. Proceedings were taken and a fine of 20s. and costs resulted.

At Newcastle, in a large shirt factory, the occupier was proceeded against for not notifying overtime worked by his employees. Overtime records were very carelessly kept, and the nights worked, in some instances, could only be identified by reference to the industrial record. In this case a fine of 20s. and costs resulted.

As my time was limited in Newcastle I was able to visit very few factories. In the district in the metropolitan area, over which I had supervision during the balance of the year, I found, in some instances, cleanliness very much disregarded. In two notable

notable instanees—that of two fashionable tailoring establishments—I found the whole premises in a very dirty condition, floors, walls, and stairways, also sanitary conveniences, being in a very dirty and neglected state. Proceedings were instituted in both above cases, fines of £3 and £5 and costs being inflicted.

Speaking generally, instruetions given *re* improvements in cleaning operations, and particularly of sanitary conveniences, are complied with in most cases promptly enough, but a great deal of carelessness and neglect of these matters are apparent in many factories when none should exist. I would like to see some employers more concerned for the well-being of, and clean conditions for working for their employees—some appear to think that any conditions will suffice, so long as the *work* is done. The constant supervision of this elass of employer keeps one busy. Of course, there are others.

Another matter to which more attention should be given by occupiers, is seeing that children under the age of 16 years obtain the necessary eertifieate of fitness where machinery is used, thus preventing the exposure of young children to danger to their health, without knowing whether they can stand the nerve-raeking and continuous hours of work entailed in some trades.

The keeping of overtime records and general provisions of section 43 of the Act are notably neglected, often resulting in proceedings being taken, but in many more cases warning letters are sent regarding same. During the past year eleven firms in my district were proceeded against for breaehes of above section, resulting in fines ranging from 10s. to 50s. and costs.

Early in the year I visited a city printing establishment, and found an undersized lad employed where power machinery was being used, who, on being questioned, turned out to be under 14 years of age, and not possessed of a special permit from the Minister to work in a factory. In this factory I also found most of the machinery very insecurely guarded. Some had alleged guards, consisting of boards roughly nailed together, but these, when touched with one hand, fell to the floor. Proceedings were taken for both breaches, and fines of 20s. and costs in each case resulted.

In a ladies' tailoring workroom I found that two girls had been employed from lunch hour (1.30 p.m.) right through to 8 p.m. without a break for a meal. The excuse offered was that the girls were engaged on a special order which was required as early as possible. I consider no order important enough to prevent a girl having her meal hour interval at the proper time. In this ease action was taken and a fine of 40s. and costs inflicted.

In another case a photographer, who employs a considerable number of hands, was proceeded against for occupying an unregistered factory for about two years. He had been previously instructed by another inspector to register, and had neglected to do so. A fine of 40s. and costs was imposed.

In a large suburban shirt factory, I found girls under 16 years of age working power machines, with no dress-guards attached for protection against accident. The girls stated they had been working them in that condition for some considerable time. Action was taken, and the Magistrate commented on such young girls being exposed to danger of that nature. The fine in this case was 60s. and costs.

I was considerably surprised to find so few dining-rooms provided in large factories, where such would be a great boon to employees of both sexes. During my years of experience as a factory forewoman, with staffs of girls varying from thirty to sixty and over, I have often heard it reckoned a great hardship having no place provided for meals, for any room outside the workroom would at least be a place free from the dust and odours necessarily inseparable from the work engaged in. I am sorry that the provisions of the Act are not more compulsory in this respect.

Mr. Inspector W. D. Clark (Newcastle) reports:—

The year 1916 opened with my transfer to the Newcastle district, which now covers an area bounded on the south by the Hawkesbury River, on the North Coast by the Hastings River, and on the Main Northern line by Werris Creek, and includes the Cessnock area and the Denman-Merriwa line. Outside the original Newcastle area, which was limited in comparison with the present district, much of the work was over virgin ground, and in many instances in localities removed from railway lines, and difficult of access. In the year's work, some eighty to ninety new factories have been added to the register, and in the visitation of these and those previously on the register, I have travelled some 8,000 odd miles by train, 1,000 odd miles by vehicle, and visited, some several times, between seventy and eighty towns or villages outside the city of Newcastle. Altogether some 1,120 inspections were made, and 425 cards of instructions served on the various occupiers.

Although the proclamation, extending the provisions of the Factories and Shops Act to the whole of the State, came into operation on the 1st July, 1915, I found an immense amount of ignorance prevailing amongst occupiers of even large factories, particularly sawmills, with regard to the obligations imposed on them by the provisions of the Act. The covering of the area under the jurisdiction of the Newcastle office is not yet complete, there being several localities I have not yet had an opportunity to visit. These will be attended to early in the new year.

Guarding

Guarding of Machinery.—Sawmills constitute a fair proportion of the factories in this area; with some exceptions, very little attention has been paid to this important phase of factory work, and some opposition has been shown by certain occupiers, particularly in respect to the guarding of circular saws; in very few instances have efficient saw guards been provided. In old-established factories, anything from the installation of an ordinary splinter board has been strenuously objected to. An extraordinary diversity of opinion prevails amongst these people in this connection. Some urge the absolute impracticability of any safeguard appliance, whilst others, with equal practical experience, have admitted the necessity and the practicability of providing efficient safeguards for circular saws, the importance of which cannot be too strongly emphasised. Many of the new mills, on the contrary, have shown an appreciation and a ready acceptance of this principle by agreeing to the installation of guards, but the results are not yet ascertainable, as many of these mills have not so far been revisited. The protection of the mill gearing has also been very inadequately attended to in many places, and in some cases proceedings had to be taken where the directions given had been disregarded. The regulations of the 10th March, 1916, providing for the inspection of boilers, have been brought under notice wherever required, and due attention has been paid by occupiers generally to this phase of factory requirement, even in new centres where other aspects have not been so regarded. This perhaps is attributable to other agencies interested in bringing the matter under notice. In some cases, however, no attention has been paid to the matter.

Accidents.—The accidents reported and investigated numbered 111, but of these thirty-nine only came within the provisions of section 38. In a few instances accidents occurred which were not reported, and in one of these, where a boy had his leg caught on a projecting set screw, action was taken for the failure to report same, the occupier being fined 20s. and costs. Of the accidents coming within the section the more serious were as follows:—

An apprentice at the steel works had both his arms taken off as a result of being crushed by an overhead electric crane on a travelling road. The youth had climbed up to the travelling road in order to adjust a belt, without notifying anyone that he intended to do so. Whilst hanging from the road by the arm the crane moved down the shop, caught his arm, and the lad, in swinging round, got caught by the other arm also. The practice had been for a person doing such work to notify the crane-driver or some other person, to stand by for that purpose, the same method being followed whenever the crane was about to move up or down the shop. The precaution was omitted in this instance, and the crane-driver was unaware that a person was on the road until he struck him. An electric gong has, since the accident, been attached to the crane, which the driver is required to sound each time he moves the crane up or down the shop.

At a large joinery works an employee lost three fingers on one hand on a jointer machine. In this instance a guard was provided which was insufficient to meet the requirements. The guard was telescopic in principle, the cover being the full width of the cutter head, some 18 inches in length, but not reducible beyond 9 inches, with the result that the operator in planing 5-inch boards on the flat, over about 7 inches of the cutter head, was unable to use the guard, and when doing the edges, and having some 6 inches of the knife exposed, he met with the injuries indicated. Directions were given to provide a guard which would more adequately cover the exposed portions of the machinery.

At a cake factory a youth was cleaning the worm of a mincing machine. To ease the worm out of its socket, he put his hand into the feed, and in doing so inadvertently pushed the belt shifter with his arm; this threw the belt on to the running pulley, with the result that he lost portions of two fingers and suffered injury to a third.

At a joinery works, an employee was operating a spindle moulder; a guard was provided, but was not used. The job, being only of a few minutes' duration, he neglected to adjust the guard before commencing the work, with the result that the piece of stock slipped, and he lost portion of two fingers.

At a large sawmill an employee received injuries to the chest, fortunately not serious, from a piece of timber coming from the back of a circular saw, the only means of protection being an ordinary splinter board, flimsy in character, and insufficiently close enough to the saw to prevent the occurrence. Directions to provide more adequate protection had been previously given to the occupier, who had failed to provide any improvement of protection. Proceedings were instituted under section 34, but the bench dismissed the information on a technical objection on the law.

Sanitation and Cleanliness.—In localities which for some time have been under the provisions of the Act these conditions are fairly well observed, but the structural conditions of many bakehouses in the country call for considerable improvement, although, thanks to the provisions of the Pure Food Act, they are as clean as can be expected, taking into consideration their structural deficiences. I have had occasion in several instances to direct alterations which would provide a better observation of these laws. With the passing of time, however, many of these places, put up without any consideration for the laws of cleanliness, ventilation, and sanitation, will disappear, to be re-erected under modern conditions with a due observance of the obligations imposed on them by the provisions of the Act. In the meantime, improvements are being made, which will at least temporarily conform to these conditions.

Child Labour.—In the country districts child labour, that is under 16 years of age, is rarely ever employed. In the sawmilling industry the work is of a laborious nature, and young boys have not the physique for that class of work. In one or two instances only have I seen boys at work, and in such cases attention was drawn to section 45 and to the further obligation imposed by the order of the Minister under section 41.

Prosecutions.—Prosecutions were instituted in several cases during the year for breaches of section 33, failing to properly fence the mill-gearing, and under section 34, mainly for failing to guard circular saws. In one case action was taken under section 34 of the Act, and the information failed because of want of proof of service of the notice, the notice having been served by an inspector previously in the district. A further information was laid under section 33 for a similar offence. This also failed, the Bench holding that the information was wrongly laid under section 33, as a circular saw was not mentioned in the section or subsections, and the following section defined the proceedings to be adopted in regard to machinery of any kind, to which the provisions of the Act, with respect to the fencing of machinery, do not apply. This decision was taken on appeal to the Supreme Court, which held the decision to be erroneous in point of law, and referred it back for re-determination.

General.—The Newcastle district is rapidly becoming a most important industrial centre. The growth of enterprises, such as the steel works, Sulphide Corporation, and Walsh Island, with the various subsidiary industries being continuous, notwithstanding war conditions. Employment generally has been on the average very fair, the sawmilling industry, which to some extent had been languishing, was given an impetus, owing to the lessened importations of oregon, due to abnormal freights arising out of war conditions, and the indications are that a fair amount of employment will be available for some time to come.

Mr. Inspector F. A. Davis reports:—

During the period August-December, 1916, I was stationed in the Newcastle District, and inspected factories in the towns of Aberdeen, Singleton, Greta, Cessnock, Kurri Kurri, the suburbs of Hamilton, Wickham, Wallsend, Boolaroo, Lambton, Islington, and Port Waratah, also the district allotted to me in Newcastle.

Section 33.—Some occupiers of the factories inspected appeared to be obsessed with the idea that the inspector's sole aim was to direct attention to something or other, whether danger did or did not exist. When it was pointed out that it was not the intention to place machinery in glass cases, but to prevent, if possible, the likelihood of accident, willingness was expressed to provide any suggested guard—sometimes after discussing the best means to adopt. In some instances it was necessary to direct occupiers' attention to certain dangerous machinery.

Section 20.—In this connection I found the conveniences in a fairly satisfactory condition where the sewerage system prevailed; likewise in many instances where the pan system was still in vogue. Several occupiers were instructed to forthwith disinfect and scrub closets, and to maintain in a cleanly state. The pan system cannot be considered otherwise than unsatisfactory, unless proper supervision is given to same, and a disinfectant freely used.

Section 38.—I am pleased to record the fact that no fatal accidents occurred during the period previously referred to. The largest percentage of accidents that were investigated by me did not come under the Section, and some that did come under the Section disclosed the fact that the accident was occasioned through carelessness on the part of the person to whom the accident happened. To prove the thoughtlessness contended, I think the following instance worthy of mention:—"In a certain soap factory a young man was operating a stamping machine. The soap occasionally adhered to the die. Instead of the operator acting according to instructions, and stopping the machine to clean the die, he foolishly placed his hand up under the guard, with the intention of removing the congested soap from die whilst the machine was in motion, with the result that the top of his second finger was caught in the die and crushed. The guard extended fully 16 inches from the die."

In conclusion, I might state that I found the factories inspected, with few exceptions, to be in a satisfactory condition.

Mr. Inspector F. Dunleavy (Newcastle) reports:—

At the beginning of the year I took charge of the Newcastle office, and personal visits to the various factories in my area were rather limited, most of my work at this office being more of an administrative character in connection with the Factories and Shops Act, owing to the fact that a large portion of my time was given to labour exchange and other work that is connected with this office. Notwithstanding this fact, I visited a number of factories in the area that is alloted to me, and attended to various matters that required attention. Just prior to my coming to this office, the Newcastle district was extended, and now embraces an area from Broken Bay, north to Port Macquarie, west to Werris Creek, and south to the northern bank of the Hawkesbury River at Wiseman's Ferry, including the railway line to Denman and Merriwa.

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During the course of the year, it was found that a large number of factories that were some distance from the railway line had never been previously visited by inspectors. Owing to the difficulty of locating various sawmills I communicated with the District Foresters, who forwarded me a list of the sawmills operating in their particular districts, with the result that the sawmills in question were located with less difficulty than otherwise would have been the case. In some instances the distances between factories, especially sawmills, are very great, and it entails a lot of time to carry out inspections. Notwithstanding the distances and difficulties entailed, most of the factories in the Newcastle area have been visited during the year.

Section 20.—It was necessary during the year to direct the attention of various occupiers to the sanitary conditions of their factories, and in one case an occupier was proceeded against, but owing to a technical difficulty the case was dismissed.

Section 33.—Particular attention was given to section 33 of the Act, and in a few instances prosecutions were instituted and carried to conviction, but the majority of the occupiers seemed inclined to carry out the intention of the Act. One case under section 33 of the Act was dismissed by a Magistrate, who was of the opinion that an unguarded circular saw was not a dangerous machine, but on appeal the matter was referred back to him, and he then dismissed the case owing to the weight of evidence of fact being against the complainant. Special attention has been given to the guarding of circular saws during the year. It is surprising to find that, notwithstanding factories have been in existence for many years, and repeatedly visited by departmental inspectors, a large number of occupiers had to be served with instructional cards to guard circular saws during the year. A few of the occupiers did not comply with the order, which necessitated a revisit to the factories in question, and I am pleased to say that those who have since been revisited have carried out instructions given. The difficulty that appears to arise between some occupiers and inspectors is not so much a question of guarding the saws, but rather the particular class of guard which should be used. I think it is a good policy to adopt the principle of taking into consideration the class of work performed by the saw, and not stick to any set idea of insisting on a particular class of guard, but rather approve of any efficient guard that suits the class of work, and ensures a maximum of safety to the operative.

Section 34.—One occupier was proceeded against under section 34 of the Act, but the information was dismissed owing to a technical difficulty.

Section 38.—One occupier was proceeded against during the year for not reporting an accident which came under this section. A youth was caught in belting, and had his leg badly bruised, and also suffered from shock. Fortunately the machinery was stopped in time to rescue him from his perilous position. I am pleased to report that no fatal accidents occurred in the Newcastle district during the year. Altogether 192 accidents were notified by occupiers and investigated by inspectors, but only forty-nine proved to be covered by section 38 of the Act. One very serious accident occurred to a youth of 18 employed by the Broken Hill Proprietary Company, Limited. He climbed an upright and was caught by an overhead crane, which caused him serious injuries, and necessitated the amputation of his right arm, and severely damaged the left hand. Nine accidents occurred at, or in connection with, the working of circular saws. Eight occurred through being caught in mill gearing, four occurred at jointers or shapers, and four at band saws.

Section 39.—Under section 39 of the Act, I had occasion to have a notice served on one occupier to provide alternate means of escape from his factory. In this instance an old-established occupier seemed disinclined to carry out the instructions, and delayed the matter as long as possible. He eventually acted on the instructions given. In another case a new factory had been erected adjoining another factory. The question of providing a fire-escape had been entirely overlooked by the occupier of the new factory, and a fire-escape had never been provided in the old factory. In company with the district fire brigades officer I visited the factory, and it was arranged to provide a fire-proof door in the dividing wall; by that means an effective fire-escape was provided from both factories at a minimum cost, and satisfactory to both occupiers.

Fair progress has been made in factory development in this district. Large and commodious factories have been built, and in some instances existing factories have been improved and enlarged. The Broken Hill Proprietary, Limited, Port Waratah, has been greatly added to during the year, and at the end of the year 2,025 persons were employed there, and there are indications that a larger number will be employed during the ensuing year. De Meric, Limited, registered their tar distilling factory during the year. The tar is obtained from the steel works coke ovens, and then distilled and graded, and a certain amount is taken to the company's factory in Steel-street, Newcastle, where benzol, toluol, solvent naphtha, carbolic acid, cresylic acid, naphthalene, sublime naphthalene, creosote, and disinfectants are manufactured. Thousands of gallons of distilled tar are sent to the various parts of the Commonwealth from the company's works. It is the intention of the Broken Hill Proprietary Company, Limited, to erect additional coke ovens at the steel works, which will mean that the output of distilled tar from De Meric, Limited, will be greatly increased in the near future.

The coal trade (although it does not come within the category of factory administration, except that that commodity is primarily used in this district for generating power for industrial purposes) was rather slack this year in comparison to the previous year, caused mainly by the fact that oversea trade was practically prohibited.

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This district, in my opinion, is only in its infancy as far as industrial development is concerned, and if the present war ends within a reasonable time, the factories in the Newcastle district are sure to increase in the immediate future.

In conclusion, I must express my appreciation of the inspectorial and clerical staff for their efforts during the year, by assisting me to carry out the duties connected with this office.

Mr. Inspector J. Durack reports:—

The compactness of my factory district enabled me during the year to pay successive visits to the different factories.

On the whole, where defects had been pointed out to the proprietors, in order to conform to departmental requirements, subsequent inspections showed that these had been fairly well attended to.

Sanitation and Ventilation.—This is, I find, a subject that entails increasing vigilance on the part of the inspector. I cannot say that there was that amount of care taken by several employers necessary to ensure the comfort and cleanliness of their employees which the Act requires. In one case there were several employees in a factory, and for a period of two years, the time of occupancy by this employer, the place had been neither cleaned, scrubbed, nor lime-washed. The floors, three in number, were covered with thick dirt, and in some places slime, while the condition of the lavatories was beyond description, especially the lavatories on the ground floor. This floor was used by the wife of the employer. The occupant was prosecuted and fined.

In another factory an employee complained that during the last four years the establishment had not been lime-washed, scrubbed, nor cleaned; the result was that the walls and floors were in a very bad condition; the ceiling, only a few feet above the employees' heads, was covered with dirt and cobwebs. This occupier was prosecuted and fined heavily.

In a large clothing factory, where over one hundred persons were employed, I found three floors in a very dirty condition, the walls and windows were in a similar state, and the lavatories were not in a condition fit for use by either male or female workers. On these obvious defects being pointed out to the employer, he was highly indignant, and inquired if I wanted a drawing-room for the employees. He was prosecuted and fined heavily. He appealed to the District Court, where the appeal was dismissed and the conviction upheld.

Ventilation.—In four factories in the city, and two in the suburban part of my district, I had to make several visits to see that the regulations regarding air space and proper ventilation were adequately carried out. The most serious of these cases were at a photographer's premises in the city and a paint factory in the suburbs. After some little delay, I was enabled to impress upon these occupiers the necessity of having installed a system of dust exhausts, and now I can report that a good number of employers have completed the exhausts, while others have almost finished the installations at the time this report was made.

Fencing and Guarding Machinery.—This part of the Act had my careful attention during the year. Taking the whole of my district into consideration, I found, with a few exceptions, there was an honest attempt made by employers to keep their machinery efficiently guarded. On visiting a large sawmill, I found a radial arm circular saw about 4 feet in diameter without a fence or guard of any kind, and, to make matters still worse, it was placed at the end of a passage leading to the factory proper. On my explaining the risky position of this saw, and the need of guards for the protection of the workers, the foreman stated he would have it attended to. I again visited this factory sixteen days afterwards, and found the saw still unguarded. The occupier was then prosecuted and fined.

In another factory (engineering) I had warned the son of the owner as to the necessity of guarding the cog-wheels of a large lathe, also the emery wheels. After a month being allowed, I discovered the instructions had not been carried out. The occupier was then prosecuted and fined.

Accidents.—During the year it was a source of satisfaction to find there had been no fatal accidents in my district, and, with the exception of one accident to a girl in a bookbinding factory (necessitating the amputation of the index finger of the right hand, injured while working on a power press label-cutting machine), there were very few accidents of any kind to report. The accident referred to is now the subject-matter of a case laid before the Court, the girl's guardian having taken an action against the employer.

Fire-escapes.—Several fire-escapes have been erected during the year and passed by the Fire Brigade Officer. The inspection of fire-escapes in factories takes up considerable time of the inspector, owing to some occupiers, and, in other instances, owners, being rather reluctant to expend more money on the building than has already been spent to meet the requirements of the Act. I found, however, when the serious responsibility of neglecting to provide proper means of escape was impressed upon an occupier, the departmental instructions were invariably fulfilled.

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Mr. Inspector F. V. Field reports:—

During the year I made a large number of inspections of factories under my supervision, besides doing work in another inspector's district, who, through illness, was unable to give the attention his district required.

I found most of the factories in a fairly satisfactory condition. In some instances the guards were of a very primitive nature, but, speaking generally, guards have been well maintained. Occupiers in every instance showed willingness to comply with instructions. Sanitary matters are, on the whole, fair.

During the year very few accidents happened in my district. I regret to report one fatal accident which occurred at a sawmill. At the Coroner's enquiry, the evidence tendered showed that the man (an engine-driver) was oiling the bearings on the main line of shafting, whilst in motion, and got caught in the belting. Very few cases under Section 45 have come under my notice.

Inspector Miss B. Golding reports:—

The year 1916 was a particularly busy one, mainly on account of the many new factories brought into existence through military contracts, and the manufacture of articles many of which were previously imported. Yet to one line of industry it was most disastrous. This was the meat-canning.

One factory in my district had to close down early in the year. This was a loss to over 100 men and about forty women. Another factory in the same locality also closed down, affecting about 125 employees. This company removed their plant to Queensland. On visiting another, I found twelve men and five women employed where previously over 100 had been earning good wages. In most of these factories conditions *re* trade were bad indeed.

In biscuit factories trade was very good, and a certain amount of overtime was worked. In a suburban factory, where most of the female workers are on piecework, and are working under an agreement, I found rather good conditions.

In pastry factories work this year has been very general—no lost time. In one factory I found a boy of just over 14 years had been worked eight hours' overtime (three only being allowed), and nine times in succession (Sunday included). Several girls had been worked four and a half and five hours, and six times in succession, although two days previously I had visited and found several breaches had occurred, and then went fully into the Act with the manager, and, further, had the firm written to. On visiting three weeks later, I found the above breaches. Action was taken in four cases; fines of 20s. with 7s. costs were the result. In another factory I found excessive overtime had been worked, overtime or tea-money had not been paid, and the overtime had not been notified to the Department. Action was taken in several cases, and verdicts gained in each.

In jam factories wages and conditions are much improved. Sanitary arrangements are better, and in my district, where space permitted, dining-rooms were provided. Work has been constant, and in some factories an extension of overtime had to be granted on account of the many military contracts. In most of the factories new and up-to-date machinery has been installed.

An accident occurred to a young girl aged 17 years. She was working a mincing-machine mincing vegetables. When her task was completed she turned the power off, and, not knowing that the momentum continued for several seconds, she put one of her fingers in to remove a piece of carrot. It was almost severed, the result being that she lost the finger from above the middle joint. This accident was not reported, and the company was prosecuted for a breach of section 38, and a fine of 60s. with costs was inflicted.

Two scalding accidents came under my notice. Both happened to boys just over 14 years of age. In neither case had the accident been reported. Action was taken in each case, and a fine of 60s. and costs was imposed in one case. The other was dismissed on technical grounds.

Tea and grocery packing has opened up a good avenue of employment for girls. In tea-packing establishments work was very brisk. In one place, where men and boys only had been employed, the management decided to try female labour. Thirty-six boys were dispensed with and girls taken on in their place. I was informed the result was most satisfactory. The manager stated they were most reliable.

In one establishment connected with a mill excessive overtime was worked and not notified. No wash-basins were provided for the employees, who numbered over sixty (both sexes). Machinery was unguarded or the guarding was inadequate. A boy, aged 14 years, was employed without a certificate. One of his duties was to dust a self-raising flour mixer, which was about 10 feet above the floor, and unguarded. Action was taken in three of these breaches, for a breach of section 33 in particular. An adequate fine was imposed. The others were 20s. and 10s., with costs.

Order tailoring suffered more than any other trade, due, of course, to the war. Full time was seldom worked. Trade decreased, costs increased, cloth, lining, cottons, &c., went up nearly 50 per cent. Many workrooms were nearly closed; proprietors sent the cheaper or second-class work to factories instead of keeping up the expense of a workroom.

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The factories where stock suits are made were very busy. In some of these factories there is a lack of cleanliness. One factory proprietor was prosecuted for dirty premises. The magistrate fined him £12. An appeal was dismissed, but the fine was reduced to £10.

The factories which had contracts from the military authorities for khaki and dungaree suits, shirts, flannels, belts, and underwear, were kept very busy up to November. In one district I found four factories closed down, representing about 300 employees.

Dressmaking, blouses and white work factories were in constant work, and overtime was worked in many.

Millinery is a line where slackness never occurs; of course, this does not apply to the high-class milliner.

In most of the straw hat factories the female employees are on piece-work and earn a fair rate. Here, also, the work has been constant, and is light and suitable for girls.

Leather Trade.—Boots, portmanteaux, and saddlery factories have had a great amount of contract work.

Printing.—Strict supervision is still required in regard to section 20. In one large factory the workrooms were disgracefully dirty, the lavatories in the same condition. When the breach came before the Magistrate, a penalty of £5 resulted.

It was not necessary to recommend prosecution this year for so many breaches of section 33. Where I had to recommend it, verdicts were gained and fines of 40s. and 60s. were imposed. There is a great lack of wash-basins for male employees in many printing places; in fact, in many other classes of factories also. It was necessary in several instances to proceed against the employers. The Magistrate in each case fined the defendant 40s. and costs. Two of these prosecutions were in connection with drug factories, where the employees were expected to use the sinks which were installed for trade purposes. In one instance the sinks were in a filthy condition. A new departure was made this year by one company, which appointed a woman as assistant chemist in the laboratory, with very satisfactory results.

Laundries.—Workers in laundries have still many disabilities. Employers look aghast when told that seats and wash-basins must be provided. In my district it took time and trouble to have wash-basins supplied. The employers do not appear to recognise the danger of employees having to wash their hands and faces in tubs used for washing clothes. In my opinion, this is one channel through which disease is spread. Employers do not take into consideration that girls should have a suitable seat near their work, that they could use at certain times of the day.

General.—I have given special attention to fire-escapes in my district. In one factory, on three different occasions, I found the door leading to the fire-escape locked, although on each visit I had warned the proprietor. I recommended prosecution, the Magistrate made very strong comment, and fined the defendant £5 and costs. Employers in every line appear to have given more attention to the guarding of their machinery. Where prosecutions were instituted, fines from £2 to £5 were inflicted.

The dining-room is still a vexed question. One reason for employees refusing to use them is that in some factories the lavatories open into them. No girl with a sense of delicacy or refinement would use them. If employees are given dining-rooms, nicely situated, clean, and well ventilated, they might make better use of same.

In conclusion, I would like to see the Act amended, making it compulsory to provide dining-rooms, also dressing-rooms for male employees. In many factories men have asked me to advocate their cause in regard to dressing-rooms and even bath-rooms. If these were made compulsory they would prove a grateful adjunct to factory life.

Mr. Inspector G. Gregory reports:—

For the first part of the year my duties were confined to the Newcastle District, and no material change occurred throughout that area. The latter part of the year was devoted to Sydney and suburbs, and, generally speaking, I found that the factories were kept in fair condition, and by periodical inspections reasonable working conditions can be maintained for employees.

Inspector Miss J. G. Harriott reports:—

During 1916 I was able to visit all the factories employing women in the district under my charge. The need of constant supervision is always present. This is shown by the fact that during the year I issued twenty-three orders dealing with improvements and alterations in lavatory accommodation. It is still hard to make people realise that it is absolutely necessary to ventilate to the outer air, instead of into the factory itself.

During the early months of the year, temperatures were taken in several factories where the heat was thought excessive, and electric fans and extra ventilation were provided with good results.

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In a small pickle factory conditions generally were found to be very bad, owing to defective lighting and ill-drained floor space. Since my visits the state of the factory has been much improved, the premises having been practically rebuilt. An old city building used as a printing factory was found to be in a dilapidated state. After consultation with officers of the City Council, it was decided that the premises could not be condemned. The occupier, when he had this assurance, was ready to spend money on repairs. He put in an extra window and thoroughly renovated the place, with the result that conditions have been greatly improved, though it still remains one of that old unsatisfactory type of factories which just comes up to the requirements of the Act, but which is happily being superseded by more modern structures.

In a paper mills, on my recommendation, a dining-room was provided for the rag-pickers, whose work is particularly dusty and dirty. They were formerly supposed to use a meal room connected with the main factory. The two sets of girls employed in the mills do not, however, care to mix owing to the different nature of their work, and the room was left for the use of those who could more easily have done without it. This is constantly a difficulty in the question of the provision of dining-rooms, and it is not always possible for the management to provide more than one room for meals.

Overtime.—There has been a fair amount of overtime worked by women in the district during the year, a great part of it occasioned by a shortage of skilled labour, and in a few cases by special work arising from war conditions. During the end of the year the dislocation of work arising from the coal strike caused overtime to be worked.

Breaches of the Act arising from the underpayment of overtime are, I find, rare, although in one case I found that the owner of a small factory had kept his girls back in the evenings and on Saturday afternoons without any extra payment, either for tea-money or overtime. He was prosecuted, and fined for the offence.

Employment of Young People.—Two cases led to the prosecution of employers for engaging young persons under the prescribed age. It is provided by the Factories Act that girls under eighteen shall not be employed in making roofing-tiles. In a factory of this class three girls under this age were found to be working, one of them being only 15 years of age. Among the three was the sister of the forewoman of the factory, who seems to have wilfully deceived the manager in regard to the ages of the girls. As the firm had been previously warned about an exactly similar offence, court action was taken, and a fine imposed. In the other case a boy of 13 was found working in a paper-mill, although he had been previously forbidden by the Department to work at an adjoining factory, and his parents notified to this effect. I saw the father of the lad, who was also working at the mills. He told me many untruths about the matter, and it was decided to prosecute him, as well as the owner of the factory, for the breach of the Act. Fines were imposed in both cases. This boy, who appears very bright and intelligent, has been at work since he was 12 years old, and was earning 25s. per week at the paper-mills. As the father was in good work, and had only one younger child to support, there could hardly have been any valid excuse for this evasion of the law. It seems that the anxiety for immediate gain will in this, as in many other cases, lead a bright boy into the ranks of the unskilled.

The following facts in regard to the provision of a fire-escape came under my notice:—

A man carried on a small business on the eighth floor of a new building in the heart of the city. He employed one girl only, and, to expedite her work, connected a treadle machine with the electric current. This use of mechanical power brought him under the Factories Act, and registration had to be refused owing to the want of any means of escape in case of fire. The whole building is occupied by other tenants, all in equal danger.

With the male inspector for the district, a number of inspections were made in regard to fur-cutting machines used in the process of felt hat making. These machines were not considered safe for women to work at. After many experiments, they have now been made reasonably safe for anyone to operate.

The whole question of forbidding women to work at certain machines, hitherto used generally by them, has been engaging attention during the year. While every effort should be made to render the machines as safe as humanly possible, it seems hardly an opportune time to take any action which would lead to the necessity for a larger number of men being absorbed in home industries.

Mr. Inspector H. Henstock reports:—

During the year 1916 I have had under my supervision, as a Factory District, Botany, Redfern, Waterloo, Mascot, and part of Western Suburbs, in addition to country centres visited on the Southern Line.

My principal work was confined to the metropolitan area, in which I found the conditions laid down by the Act fairly well observed. Adjustments and additional guarding to dangerous parts of machinery were readily complied with when ordered.

The sanitary conditions of the Botany district are not very satisfactory. The want of a sewerage system is serious in a growing factory area like this. One large

boot

boot factory was particularly unsatisfactory, the owners of which said they were prepared to spend a considerable sum and put in an up-to-date lavatory accommodation, provided the sewerage was laid on. I am pleased to say in this instance the firm decided to go on with their scheme, and a much-appreciated lavatory accommodation is the result.

Several new factories have been added to the district during the year.

In one case in Redfern a furniture factory, which had long been a source of trouble by its congested and unsanitary condition, had grown to such an extent that it was a grave danger to health, and a potential source of accident. The Department, acting in conjunction with the Health Department, decided to condemn the factory as unfit. As a result, a commodious and much improved factory is now erected on an adjoining site.

Several accidents have occurred in the district, some of a minor character, others more serious, one case, I regret to say, ending fatally. Attending to moving machinery in two cases, clearly against orders, resulted in the loss of a hand in each case.

In a Redfern bakehouse a serious accident happened early one morning (3 a.m.), while a man was attending to a dough mixer, when his arm was caught in the revolving machine, completely crushing the arm and rendering amputation necessary. He was the only employee in the factory at the time, and escaped with his life by almost a miracle. The accident was not reported, and was only discovered at a subsequent visit. The occupier was prosecuted, and fined for not reporting the accident.

At a Botany tannery a fatal accident occurred to a youth, aged 16, who was apparently employed to carry skins from a fleshing machine. The lace of belt, which had broken, was undergoing repairs by two adult operators who had charge of the machine. The belt came through a large opening from floor above, and was alleged to be suspended from the shafting, which was revolving at the time, by a belt hanger. The youth seems to have gone up above to hang up the belt, when he was caught on the revolving shafting, and so severely injured that he died a few hours afterwards. No one seems to have actually seen the accident occur until the youth was being whirled round the shafting, when the engine was immediately stopped.

The general industrial prosperity of the district is well maintained, particularly in the leather and wool industries.

During the year I revisited country towns on the Southern Line, including Tumut, Barellan, and Wyalong Branches. I found orders to guard machinery and effect other improvements generally carried out satisfactorily. In a few instances, where the orders were not carried out, and a further warning ignored, prosecutions were taken and fines were inflicted by the court.

I found the general conditions much improved, and the benefits of the extension of the Act apparent. In some of the bakehouses the conditions were very bad, and much-needed improvements have been effected. The new boiler regulations under the Act also received attention during my visits to various towns.

Mr. Inspector R. C. Huntley (Lismore) reports:—

The proclamation of 15th June, 1915, declaring that the Factories and Shops Act would in future apply to every locality in the State, compelled the extension of inspectorial oversight to districts at great distance from the metropolis, hitherto untouched, and in January, 1916, I was transferred from Newcastle to assume charge of the Northern Rivers district, extending from Port Macquarie to Murwillumbah, with headquarters at Lismore. During the first few weeks, office accommodation was, by courtesy of the Department of Justice, provided at the local Court-house, pending negotiations for our occupation of a building, as office premises, lately vacated by the Government Savings Bank of New South Wales. The negotiations failing, an office was later established in a good central position in the town.

The Northern Rivers water one of the richest portions of the State, and the movement, set on foot some years ago, to have the area from Grafton to the Tweed River created a separate State of the Commonwealth, arose very probably, in the first place, by its remoteness from Sydney under existing means of communication, but there is no doubt that the desire for separation was aided by the fact that the great fertility of the soil and good seasons had produced much wealth to the residents, and induced a feeling of strong independence.

To introduce industrial legislation to such a conservative people required tact and patience, and in this connection I found the preliminary visit paid to the district by Mr. Senior Inspector Hastie in November, 1915, of much value. The factory occupiers were more or less prepared to meet the resident officer in an amicable manner, a condition which I set myself to engender into complete co-operation. With clear exposition, and a repeatedly expressed desire to assist every occupier in every possible way to meet the requirements of the Act, I had no difficulty whatever in engaging their close interest, and my instructions and suggestions were readily carried out.

Fencing and Guarding of Machinery.—As might be expected, there are, at present, no very large manufacturing industries in this district, as is well evidenced by the fact that Lismore, the largest town, and regarded as the chief centre, has only about sixty factories, employing about 400 hands, out of a municipal population of nearly 16,000

16,000. Dairy-farming is, of course, the chief industry, followed by that of timber-getting and cutting. During one afternoon, on the road between Coff's Harbour and Grafton, I met upwards of twenty teams of oxen, each drawing a huge log millwards. Some of the sawmills employ thirty to forty hands, and in these, particularly, I found the machinery guarded in complete compliance with the Act. The occupiers were ready to discuss the latest developments regarding dangerous machines, and to take every precaution for the safety of their employees. Realising the value, in a new district, of having a factory centrally situated, having all its machinery protected by the latest guards, I sought and obtained the active co-operation of the directors of a large firm controlling a business in which all classes of wood-working machines are used. The plant is of some magnitude, and includes heavy belts running overhead. All of such machines and belting were protected by the guards approved by the Department, and provided ocular demonstrations for any factory occupier who cared to see them, and who had probably expressed doubts as to safeguards being affixed without lowering the efficiency or output of the machine. To my knowledge, many visits were paid to this mill with beneficial results to our administration and all concerned.

Boiler Regulations.—The need for strict compliance with the boiler regulations under the Act was brought closely under the notice of factory occupiers concerned, and all information pertaining thereto afforded.

Sanitation.—Lismore having a sewerage system, electric light, and very clean streets, provided a standard which I found reflected in its factories, which were clean and well lighted. One modern building of three floors and certificated fire-escape compares very favourably with any factory premises in Sydney. It was necessary in a few instances to order additional w.c. accommodation, which was at once arranged for.

Accidents.—No accidents were reported, and no prosecutions resulted during 1916.

In a district of such magnitude it will be readily understood that I found it quite impossible to visit all the factories, and had to content myself with visiting the largest towns. It early became clear that modern means of locomotion were necessary, and I recommended that a motor-car should be provided, as economical and enabling the resident officer to move about quickly to the advantage alike of the Department and the public. The recommendation was approved and the car will, I believe, be shortly in commission.

The creation of this new factories district gave general satisfaction, and the local office soon became a strong centre of advice. Previously, all matters of industrial import, large or small, had to be referred to Sydney, involving delay, and leading, in many cases, to continuance of wrong conditions. The residents, being now able to interview the local inspector or call the local office by telephone, are able to get information readily, and the Act must be better observed in consequence.

Visit of the Under Secretary.—As satisfactory evidence that the establishment of a local office found very general favour, it can be mentioned that during a visit paid to the district by the Under Secretary (Mr. J. B. Holme) he was met at the larger towns by the local Chambers of Commerce, the members of which were unanimous that the extension of the Factories and Shops Act to the Northern Rivers area had the complete endorsement of employers. Remembering, with this, that the provisions of the Act are wholly for the benefit of the employees, it may be safely said that the future of the operations of factories legislation in this important part of the State may be viewed with confidence.

Mr. Inspector A. G. P. Jackson (Broken Hill) reports:—

The city of Broken Hill is still suffering from the effects of the war, and although the higher prices paid for lead and zinc make up to a certain extent for the smaller output of the mines, the reduction in the number of miners now employed, compared with those engaged in the industry prior to the war, seriously affects the general prosperity of the community as a whole. Happily, at the time of writing, there is no industrial trouble to disturb the serenity of the situation, although there have been several strikes during the twelve months in which I have been stationed in this district. The trouble over the forty-four hours per week on the mines has been settled, and several other minor disputes amicably arranged.

The factories generally have been kept in a satisfactory condition, and the employers have willingly complied with orders given for guarding machinery, attendance to sanitary conditions, &c.

One difficulty the proprietors of factories in this district have to contend with is the frequency of heavy dust storms. A factory may be thoroughly clean one day, and the following day may have the appearance of not having been cleaned for months, owing to a dust storm covering the place in dust.

I have to record no fatal accidents, and only one accident under section 38 occurred. In this case a young man had his right thumb amputated at a circular saw used for cutting firewood, although a guard had been provided and was in use at the time of the accident. The Barrier Munitions Proprietary Company, Limited, which gave promise of employment to a large number of men, ceased operations after only a few months' work.

Mr. Inspector J. Lynch reports:—

During the period under review I had charge of the district comprising that part of the city east of Crown Street, Surry Hills, and practically the whole of the Eastern Suburbs. The depression in trade consequent upon the war was very marked in the district, particularly in those trades concerned in the building and furnishing industries. The coal strike during the latter part of the year was a serious blow to many of the factories in my district. Fortunately, the year's work was not marred by any fatal accidents, and by only a few in which permanent injury was done to the operative. The proprietor of a furniture factory was the victim of an accident on a spindle-shaper, which caused the loss of four fingers. The accident was stated to have occurred while a fence guard was on the machine. The only other serious accident occurred to a man who was caught in a travelling belt and thrown from the ladder on which he was working. His injury was a fracture of the skull, from which happily he completely recovered. I found little difficulty in getting factory owners to comply with the provisions of the Act, and had to resort to the court to enforce compliance on only one occasion. The high standard of efficiency set by some of the large factories in my district was well maintained throughout the year, and one additional large factory was established, which promises well to rival the best factories in the State in the matter of conserving the health of the employees and providing for their comfort.

Mr. Inspector H. McEvoy reports:—

The terrible war still raging has had a depressing effect upon many industries throughout districts visited by me; and there are some employers who regard with disfavour the enforcing of the provisions of the Act during the continuance of the war.

I am pleased, however, to report that the great majority of employers have carried out instructions given without causing trouble between the Department and themselves.

The Minister's order under Section 41, and also the regulations *re* boiler inspection, caused a slight stir when served; but I found that employers generally were in accord with the necessity of the order in respect to the machines classed as dangerous, and all were of opinion a strict supervision was necessary in regard to inspection of boilers.

I visited towns between Milton and Eden, and from Bateman's Bay to Eden—an area not previously within the provisions of the Act. I registered the factories therein, and gave advice and left instructions in respect to guarding machinery, etc. The necessity of the area being visited was very apparent, the guarding of machinery, etc., and the necessity for impervious floors in bakehouses and aerated-water factories requiring much attention. Concrete floors have now been laid down according to instructions given.

In the part of the metropolitan district under my control, I found the guarding of machinery, etc., fairly satisfactory.

I devoted special attention to the sanitary accommodation. In many instances I found that both employer and employee were not seized with the seriousness of keeping the water-closets in a thoroughly clean and efficient state. From publications issued and reports in daily newspapers, venereal diseases are increasing to an alarming extent. The medical profession have proved that this horrible disease has been spread through contamination with seats in water-closets—especially, it is stated, are females liable to become infected by this means. It is therefore essential that strict supervision be paid to enforcing compliance with the regulation dealing with water-closet accommodation, &c.

A fire, supposed to be the work of the I.W.W., destroyed one of the largest factories of its kind in the Commonwealth, resulting in a few hundred employees being thrown out of work. Other firms came to the aid of the firm burnt out, and offered the use of part of their premises and machinery, but the accommodation required to house such a large number was hardly sufficient, and not in conformity with the Act. An application was made to the Minister for a temporary exemption from the provisions of the Act. With Senior-Inspector Miss Duncan I visited the premises to be availed of, and made a report thereon, in which we recommended that temporary exemption be given. A permit to occupy premises was granted.

A number of accidents occurred during the year. I regret to report one was fatal. A male employee was cleaning waste from underneath a carding machine; he was using a hook to gather and rake out the "fudd." At time of working he was wearing a shirt with a loose sleeve, and the sleeve got caught on a "swift" drum, and the unfortunate man's head and shoulders were dragged between the "swift" and "doffer" drums, causing instantaneous death. At the inquest a verdict of accidental death was returned. In connection with the accident, I recommended that the aperture of the machine, through which the deceased's body was dragged, should be partly covered. This has been done. Another male employee and two female employees met with accidents at same mills. The male employee was severely scalded about the body and legs through a dye vat overflowing. The steam valves connected with the vat were not easily "got at," and the employee thereby sustained injuries stated. The company, at my

my suggestion, altered the position of the valves. A female was working at a "gilling" machine, and was cleaning waste off the brunt roller whilst same was in motion: result, one finger broken and three badly crushed. I recommended a guard for rollers, which has been adopted. Through "carding" driving belt of machine whilst in motion a female had her thumb injured. At another woollen mill injuries were sustained through employees cleaning machines whilst in motion. In both mills cleaning of machinery whilst in motion was prohibited by printed notices and verbal instruction. Accidents, through shuttles flying out of looms, occurred at another woollen mill. In connection with the guarding of shuttles, I made inspection and investigation at a number of mills, and submitted a report thereon. Investigation showed that guards are used, but are not effective; further, that, so far as is known, an "effective" shuttle guard has not yet been devised. Three accidents occurred in printing establishments; but in no instance could the firm be held to blame. Minor accidents occurred at engineering works and a cigarette factory. Two accidents occurred at furniture factories. A man had his thumb and index finger cut off by a circular saw. The saw was guarded. No one witnessed the accident, and the injured person could not—or would not—give any explanation of how accident occurred. The other instance was where the son of the proprietor had his hand severely lacerated through coming into contact with knives of planing machine. It was asserted that the guard was on machine, and hand was dragged underneath the guard.

The matter of fire-escapes has received attention. In two instances tenants of premises have had to vacate same because owners would not comply with requirements of the Act. I have received every assistance from the Fire Brigade Board Officers in connection with fire-escape matters. Whilst fully endorsing the necessity for fire-escapes in all factories, I cannot refrain from observing that small factory owners have just cause for complaint when they state it is unfair that they should be compelled to erect a fire-escape simply because they happen to be on, say, the second floor with four persons engaged, whilst an employer in an adjoining building—perhaps with twenty or thirty clerks working on the sixth floor, is not amenable to regulations regarding fire-escapes. It is time a building act was made law containing provisions that would safeguard the lives of everyone—irrespective of their trade or profession.

Mr. Inspector J. Nolan reports:—

During the period under review the northern part of the City and portion of the Western Suburbs were allotted to me for attention. I have not been able to cover the whole of the districts mentioned, as I was engaged upon a large amount of work connected with industrial disputes. I have, however, visited a fair number of factories and, on the whole, found the provisions of the Act reasonably observed.

Registrations.—I dealt with a number of applications for registrations under the Act, and it is pleasing to note that in most cases the applicants were persons who removed to more suitable premises.

Notices to be Posted.—This section is one that has given me very little trouble. The occupiers, with one exception, immediately complying with any deficiency under the section.

Records.—I have found that strict attention is necessary to the keeping of records of overtime worked, and in one case found that the records had not been kept for months. Action was taken in this matter, and the occupier fined. In another factory the occupier, when questioned regarding the keeping of records, said, "I thought the system had been abandoned."

Certificates of Fitness.—This is a matter that needs careful supervision, and it is pleasing to note that the general practice of occupiers is to employ young children in a moderate proportion. I, however, found one factory with a large number of young children employed. Some occupiers feel that this section of the Act should be amended so as to permit children, whose parents are in straitened circumstances, to start their working careers earlier, and thereby assist to maintain the home. One occupier voiced his protest through the daily papers. Following on this matter, it is perhaps interesting to know the views expressed on this subject in other parts of the world. At the fifth annual meeting of the National Child Labour Committee, Professor G. R. Henderson submitted a paper on "The duty of a rich nation to take care of her children," and the following is an extract from same:—

> "Nor can we say, with any shadow of reason, that the labour of any child under fourteen is necessary to support a widowed mother or sick father. Indeed, no State and no Nation can afford to offer up such a sacrifice to such an end. The widowed mother and sick father should, indeed, have the relief which their wants require, but let that be done at the expense of the capable and successful, and not at the cost of innocent and immature human beings. The nation must not use up its children in the present, because they are needed in the fulness of their strength in the future. No more short-sighted economic policy was ever pursued by a benighted people than the policy of destroying childhood in mines, mills, and factories."

So long as strong and willing men and women are almost begging for employment, it is false to claim that the commodities needed by human society require the exploitation of childhood.

Guarding

Guarding of Machinery.—I have given this section of the Act careful attention, and regret to have to report that several serious accidents occurred. The most serious happened at a factory where a circular saw was installed—a man losing four fingers. In this case an approved type of guard was attached to the machine, and a block also provided to push the timber past the danger point. The accident was caused through the operator failing to use the block when cutting short lengths of timber.

During the year I also visited the North and North-western portion of the State. This was the second occasion on which visits were made since the Act has been extended to the State. I found that, with few exceptions, the directions given by the inspector on the previous visit were carried out. I, however, found one occupier who refused to register his factory, or guard dangerous machinery, with the result that action was taken against him and fines imposed.

Sanitation.—I found the sanitary accommodation in fairly good condition, no case coming under my notice necessitating action being taken.

Mr. Inspector G. Pickering reports:—

At the commencement of the year I was allotted a district which comprised part of the City, and Newtown and Enmore, and found the provisions under the Act on the whole well observed.

Sanitation and Ventilation.—The sanitary conditions were well up to standard, but I found it necessary to serve instruction cards for lime-washing. The ventilation provided in the factories generally was satisfactory, but in some cases certain firms found that, on account of structural difficulties, it was necessary to provide fans. I paid strict attention to the dust trouble, and found that the occupiers of boot factories were the chief offenders. A little explanation is needed in this matter. The machines are usually placed in a line down the side of the machine room, and are each fitted with a fan exhausting into one common pipe. Some of these machines have fans which are much more powerful than the others; consequently the dust is blown back through the small machine, and, instead of taking away the dust, the nuisance is increased. I had several of these plants altered, by having a suction fan placed at the end of the pipe in close proximity to the bin, which proved successful.

Guarding of Machinery.—This very important matter continually needs attention, as some occupiers persist in erecting flimsy guards, which serve no other purpose than to be a source of danger to employees. I have found it necessary to instruct occupiers to guard the overhead high-speed belt, as accidents have happened through these breaking and falling on employees. Such an accident happened in a large printing factory, the result being that a girl was injured on the head. The difficulty of guarding the power press appears to have been overcome to a great extent by the adoption of a simplified "lock-gate" guard, but, unfortunately, this guard cannot be applied to all power presses, particularly the English and American designs. In wood-working machines the shaper-guard of the saucer pattern is a further step to safe-guarding this dangerous machine.

Accidents.—Accidents have not been frequent in my district. A boy employed in a large printing factory was operating a platen machine of the "Victoria" type. This machine was fitted with a "throw-off guard," but somehow he allowed his hand to remain on the plate, the result being that some fingers were badly crushed and had to be amputated. Another bad accident occurred in a butcher's sausage room. An employee had been operating a mincing machine, and, after completing the work, he commenced to dismantle the machine for cleaning purposes. While doing this the belt jumped on to the fast pulley, with the result that his hand was drawn into the screw, and three fingers were cut off. The cause of this accident was a defective belt shifter. Some time afterwards an accident occurred on the same machine, but under totally different circumstances. An employee was operating the machine and, in pressing the meat down in the hopper, he allowed one of his fingers to come in contact with the screw, with the result that it was cut off at the second joint.

Fire-escapes.—The usual installations and inspections of fire-escapes have been carried out in conjunction with the District Officer (M.F.B.). Occupiers had to be cautioned on account of obstruction in one or two cases.

Prosecutions.—A boy 15 years of age was employed in a printing factory, and was put on by the foreman to work a large platen. After working for two or three days he had his hand caught in the machine and badly injured. A prosecution followed, and a penalty was imposed.

Bake-houses.—The cleanliness of the bake-houses in general and the duty of occupiers to whitewash were noticeable in the district.

Country Inspections.—I had occasion to visit the Western District of the State. Needless to say, there was much room for improvement in all matters appertaining to the Act. Instructions were numerous, but I found the occupiers in almost every case eager to comply with the new conditions. I also visited the Northern District as far as Coff's Harbour This inspection was made in connection with the new boiler regulations

regulations. There appears to be a great difficulty in guarding the circular saw largely used in breaking down. The "metal guard" had been installed in some of the mills, but had to be dispensed with, as it was found impracticable to use it for sawing certain kinds of timber. The most efficient method, in my opinion, is to revert to the old style of splinter guard, constructed of stout timber and made adjustable so as to rise and fall to meet the thickness of logs to be operated on. An addition might be made by fitting a stout piece of iron to the back of this board to cover the major portion of the periphery of the saw. This guard has already been tested at one or two mills and found satisfactory. Since the application of the boiler regulations, which took effect on the 10th of March, I have paid particular attention to this matter. When visiting the North Coast, I had occasion to inspect certain boilers, particularly those in saw-mills. The regulations should have a beneficial effect, as some boilers were in an unsatisfactory condition, and required a reduction of the working pressure. There was also a tendency by some employers to over-estimate the strength of their boiler by placing extra weights on the safety-valve lever. An astonishing feature was the age of some boilers, which were being worked at the same pressure as when newly installed, an instance of this being a boiler known to be 36 years old. Needless to say, the pressure was reduced.

Inspector Miss G. L. Scobie reports:—

Following upon my appointment as factory inspector on 31st March, 1916, I commenced the work of general inspection in company with Miss Duncan on the 26th April, 1916. From 12th June until the close of the year I made a fairly complete inspection of the district allotted to me—containing 160 factories—making over 300 visits.

Employment.—I found all the large factories in the area allotted me working at full pressure, and in a great many instances—notably the boot trade—more labour would have been employed had it been available, especially female labour.

Sanitation.—The majority of factories under my supervision were modern structures, and so far as sanitary arrangements were concerned, left little to be desired. Several instances of insanitary conditions came under my notice, which were, upon attention being drawn to defects existing, immediately rectified. In these cases I was of opinion that the employees were to blame equally with the manager or occupier of the premises. I found two large clothing factories—controlled by the one employer—in a very dirty state, but after I had paid them one or two visits they were cleaned to my complete satisfaction.

Seating Accommodation.—In the matter of supplying seats for shop and factory employees, I found that, where practicable, this part of the Act was fairly well observed. In one jam factory—the only one in the area in which I was working—I found, on the occasion of my visit, women standing peeling lemons and oranges at the limit of their speed. I asked the manager wherein lay the necessity for such speed, and why were the women not seated. He stated that the women were working on piece-work, and that seats were provided, but that it was their option to stand. I was shown a number of high-legged stools alongside the work, which were there to be used if desired.

Dining-rooms.—In many factories I found that no separate dining accommodation had been provided, but in some factories, where such accommodation had been provided, it was not always availed of.

Certificates of Fitness.—In a few instances I found girls under 16 working without certificates, but when compared with the numbers under sixteen who had their certificates, I am of opinion that the desire of the majority of parents and factory occupiers is to comply with this requirement.

Machinery.—Speaking generally, I have not inspected machinery, except to see that youths and female operators were properly protected. In two instances I reported —in conjunction with the male inspector for the district—on the advisableness of permitting women to operate certain kinds of machines, *e.g.*, a hand guillotine and a power press, and in both cases I was of opinion that permission should be granted.

Inspector Miss M. Stuart-Robertson reports:—

In the districts over which I have had supervision during this year I paid special attention to sanitation. In the majority of cases my orders to provide extra lavatory and closet accommodation were cheerfully and promptly attended to by the occupier. Whilst in many factories I found sanitation well maintained, in a great number petty breaches were constantly occurring and recurring. I found in the last-mentioned that no cleaners were employed, the work of cleaning lavatories and closets, and sweeping, being allotted to girls employed on the various trades in the factories, who have a dislike to leaving the occupations, for which they have been engaged, in order to clean up. The result is that the sanitary conveniences are rarely satisfactorily cleaned. Frequent visits and constant vigilance of the inspector are very necessary, otherwise serious consequences may ensue.

Certificates

Certificates of Fitness.—I have frequently found girls under 16 years of age employed for some weeks, before having obtained a certificate of fitness as required by section 45. I have served numerous orders on occupiers to obtain this very necessary certificate for employees, and am pleased to say that in every instance a certificate was granted. For some of the more serious breaches legal proceedings were instituted.

I found an electroplating factory in a very dirty state. Action was taken, and though the manager pleaded not guilty, the Magistrate convicted and imposed a substantial fine. In a large printing establishment I found the guarding of the machinery very insecure. I pointed this out to the occupier, who resented my instructions to guard securely. After a period of ten days I revisited this factory, and found that no effort had been made to secure the guards. I reported this and action was taken. A fine of 40s. and costs resulted.

For not providing separate closet accommodation for female employees, the occupier of a confectionery factory was fined 20s., 6s. costs.

In a large brush and broom factory overtime was worked on fifteen nights by females, the numbers employed varying from five to eleven. No record was kept of this overtime, no overtime rates paid, and it was not notified. Legal action was taken in two cases; fines of 20s. and costs in the first case, and 10s. and costs in the second, resulted.

In a laundry three girls were employed from 8 a.m. to 4.30 p.m. without a break for refreshments. No record was kept of this overtime, no overtime rates paid, and it was not notified Prosecutions were instituted in two cases, and fines and costs imposed in each case.

Dining-rooms.—I have taken a keen interest in this matter, and have discussed it with occupiers of factories on several occasions. I was told by the managers of two large factories that the dining-room is very necessary if a factory is to be kept clean. They said that where employees sit in the workrooms to eat their lunch, crumbs and other scraps bring rats and mice to the premises. In boot factories, where a good deal of dirt accumulates from the several processes through which the boot must pass before being ready for despatch, I consider a dining-room absolutely necessary. In jam factories also there is a great necessity for suitable dining-rooms. The floors are nearly always wet, and in many instances sloppy. At my request the manager of a large jam factory provided a temporary dining-room at a short distance from the factory, and plans have since been prepared for the erection of a very fine dining-room. In a paper-bag factory I found that one workroom was spacious, clean, and well ventilated. Here the girls could comfortably take their lunch, but the other workroom was so crowded with machinery and material, that there was not a square foot of space where the employees could take their lunch. I pointed this out to the manager, who provided a clean, airy, dining-room of sufficient space to accommodate the girls employed in No. 2 workroom. In several other factories I have suggested minor improvements in dining-rooms already provided, and I am pleased to state that in every instance considerable improvements were made, which were much appreciated by the employees.

Mr. Inspector J. Wallace (Lithgow) reports:—

Since taking over the Lithgow office at the commencement of the year, I have endeavoured to visit the greater part of the district under my supervision, in conjunction with the other duties of this office. I hope to visit the remainder of the area in the early part of the ensuing year.

The requirements of Part II of the Act have received the necessary attention when visiting the factories, as will be seen by the number of instructions served on the occupiers to carry out the provisions of the Act and Regulations, particularly in the area which came under the provisions of the Act in the year 1915, also in factories that had not been visited for some length of time.

Sanitation and Ventilation.—In a great number of factories the conditions of this section of the Act was fairly complied with, whilst in a fair number of cases it was necessary to issue instructional cards to have defective sanitation and ventilation conditions remedied; in each instance I have urged upon the occupier or manager the necessity of paying particular attention to the provisions relating to sanitation, and thereby preventing ill-health and disease to persons engaged in the industry.

Guarding of Machinery.—I have paid particular attention to the safeguarding of machinery. In a great number of factories it was necessary to issue instructions to provide additional guards, and proper fencing of flywheels and dangerous parts of machinery; in some cases the guards were a danger to the employees, also the danger points were not effectively guarded. It is pleasing to note the care and attention taken by a fair number of occupiers in the safeguarding of machinery, also the willingness of employers to comply with the provisions of the Act.

Accidents.—One of the most serious accidents occurred at a cokeworks coal-crushing plant, where a boy under 16 years of age, who was engaged in regulating the flow of coal into the elevator buckets, suddenly left his work and went on to the floor above, and crossed over a revolving intermediate driving shaft, which caught the lad's coat or bag that was over his back, and whirled him around the shaft, striking his head on the floor, causing instantaneous death. The shaft was not protected.

Another

Another serious accident occurred at a cokeworks engine-house. An employee was dismissed from the works and eventually returned to get his wages due, when the foreman ordered him off the works owing to his drunken state. The employee left, and then went into the engine-room and overbalanced near the fencing, falling between the rail and floor headlong into the flywheel, death being instantaneous. The coroner gave a verdict of accidental death. In this case a second rail or wire guard should have been provided in the first instance. Two extra rails were provided after my notice was received.

Another accident occurred at a drilling machine. An employee had the thumb and part of index finger taken off in the bevelled cog-wheels of a drilling machine. The occupier was proceeded against and convicted before the court for neglecting to guard the part in question.

In all there were twenty-three accidents reported on of various kinds.

Child Labour.—The provisions of the Act appear to be fairly complied with under this section of the Act, most of the breaches of employing boys without a certificate of fitness were found in bakehouses, and a few in printing factories. The occupiers complained that, owing to the youths enlisting for military service, they were unable to obtain the labour required. Proceedings were instituted in two cases and convictions obtained, also in connection with the employment of a lad under the age engaged on melting metal.

General.—The most important industries, such as cement, coal, limestone, manufacture of iron and steel, shale and oil works, and woollen industries have been very busy throughout the year, except the period of industrial disputes, when some of the large industries lost a fair amount of production through stoppage of works.

The new works at Kandos are now producing a fair amount of cement. Whilst visiting this factory I was surprised to see the large aerial tramway, extending for 3 miles to the limestone quarry, and returning to the works where the minerals are treated and converted into cement by an excellent service of machinery; parts of the machinery necessary to the completion of the plant are at present on the way out from England. The electric power-house and plant, containing duplicate sets of turbine engines and generators, also up-to-date steam plant, are installed in a creditable manner and well worth seeing. The company has agreed to instal an excellent system in connection with the sanitation, which will be a great benefit to the health of employees.

From a general observation of the whole of the Mudgee line, and from Newnes, Lithgow to Mudgee, as regards the mineral resources, there appears an unlimited supply of the various minerals such as coal, ironstone, limestone, marble, shale, also other minerals and clays of high commercial value. The prospects of industrial activity appear bright for the near future.

The whole of the factories in the district should, in my opinion, be visited at regular intervals to enforce the essential provisions of the Act and Regulations.

Mr. Inspector Andrew Waugh reports:—

During the period from January to the middle of August, 1916, I visited most of the factories from Stanwell Park to Nowra, and, generally speaking, found that occupiers were carrying out the provisions of the Factories and Shops Act. No fatal accident happened in the above area during the year 1916.

From the 21st August to the 30th November, 1916, I was given charge of No. 7 District, Sydney, where I had a greater opportunity to observe the conditions surrounding factory work. Whilst factory work seemed about normal in Sydney, I noted that several new factories were in course of erection near Parramatta. Occupiers, as a rule, in this district showed a willingness to comply with the Factories and Shops Act. A stoppage took place in manufacturing owing to the coal strike, but happily this was of short duration; the different factories at the end of the year were fairly busy, and the outlook for 1917 is fairly good.

Mr. Inspector G. R. Young reports:—

During the year 1916 I visited the whole of the factories in the district allotted to me, and served copies of the Ministerial Order under Section 41 where necessary. I investigated several accidents, caused mostly by wood-working machines, and am pleased to report there were no fatal accidents, the most serious one being at a firewood sawmill, the operator having half his hand cut off. I found the factories in a generally satisfactory condition. In several applications for registration of factories above the second floor, I found no provision for alternative means of escape in case of fire. These were provided in all cases but two, and those tenants left the premises and procured others which complied with the Act. I also had a few cases where fire-escapes had been in existence at the time of registration, but had since been built out or were not satisfactory. These were also dealt with satisfactorily.

APPENDICES.

APPENDICES.

ALL FACTORIES AND SHOPS DISTRICTS.

Table I.

Number of Factories on Register—1912–16.

Year.	Metropolitan.	Newcastle.	Broken Hill.	Rest of State.	Total.
1912	3,989	589	125	500	5,203
1913	4,322	572	129	538	5,561
1914	4,579	583	148	683	5,993
1915	4,758	579	156	1,932	7,425
1916	4,814	774	150	2,327	8,065

Table II.

Number of Persons employed—1912–16.

Year.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1912	55,559	26,108	4,434	1,290	720	267	3,606	598	64,319	28,263	92,582
1913	57,891	26,314	4,637	1,346	751	269	3,767	609	67,046	28,538	95,584
1914	54,455	24,884	4,348	1,129	593	198	3,940	594	63,336	26,805	90,141
1915	54,891	26,438	5,137	1,185	671	143	9,818	940	70,517	28,706	99,223
1916	47,378	26,649	5,546	1,114	529	146	10,442	848	63,895	28,757	92,652

Table III.

Horse-power of Machinery used—1912–16.

Year.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.	
	*Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.
1912	2,685	77,129	351	6,663	67	1,188	242	10,324	3,345	95,304
1913	2,919	84,993	351	6,851	71	1,231	249	10,382	3,590	103,457
1914	3,291	95,043	353	8,554	84	1,288	319	10,916	4,047	115,801
1915	3,145	98,470	350	9,088	79	1,198	1,053	23,750	4,627	132,506
1916	3,662	108,667	498	57,642	106	1,280	1,422	37,694	5,688	205,283

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using power.

Table IV.

Number of Persons employed in each District—1916.

District.	Number of Factories on Register.	Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total
Metropolitan	4,814	1,892	2,463	3,709	4,346	4,178	6,045	37,599	13,795	47,378	26,649	74,
Newcastle	774	189	134	406	271	462	313	4,489	396	5,546	1,114	6,
Broken Hill	150	39	8	56	27	40	32	394	79	529	146	
Rest of State	2,327	246	59	625	134	710	201	8,861	454	10,442	848	11,
Total	8,065	2,366	2,664	4,796	4,778	5,390	6,591	51,343	14,724	63,895	28,757	92,

ALL FACTORIES AND SHOPS DISTRICTS—*continued.*

TABLE V.

Horse-power of machinery used in each District—1916.

District.	Steam.		Gas.		Electricity and other.		Total.	
	Number of Factories.	Horse-power.	Number of Factories.	Horse-power.	Number of Factories.	Horse-power.	*Number of Factories.	Horse-power.
tropolitan	416	59,432	592	10,137	2,654	39,098	3,662	108,667
wcastle	194	45,949	101	994	203	10,699	498	57,642
)ken Hill	10	653	36	314	60	313	106	1,280
st of State	467	26,849	380	5,152	575	5,693	1,422	37,694
Total.....	1,087	132,883	1,109	16,597	3,492	55,803	5,688	205,283

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using power.

TABLE VI.

Classification of factories in each District, according to number of persons employed—1916.

Persons Employed.	Metropolitan.	Newcastle.	Broken Hill.	Rest of State.	Total.
ıder 4	2,189	473	87	1,569	4,318
4 and under 10	1,247	182	47	562	2,038
10 ,, ,, 20	638	60	12	135	845
20 ,, ,, 30	266	21	3	35	325
30 ,, ,, 40	109	15	...	5	129
40 ,, ,, 60	140	8	...	8	156
60 ,, ,, 80	58	4	1	4	67
80 ,, ,, 100	37	2	...	1	40
00 ,, ,, 150	61	5	...	3	69
50 ,, ,, 200	25	2	..	1	28
00 ,, ,, 300	20	...	...	1	21
00 ,, ,, 400	9	...	...	1	10
00 ,, ,, 500	2	...	...	2	4
00 ,, ,, 750	7	1	...	...	8
50 ,, ,, 1,000	5	1	...	...	6
00 and over	1	...	...	...	1
Total	4,814	774	150	2,327	8,065

TABLE VII.

Number of persons employed in each Class in Districts—1916.

Class of Factory.	Metropolitan.	New-castle.	Broken Hill.	Rest of State.	Total.
I. Treating raw materials, product of pastoral pursuits...	2,329	57	6	265	2,567
II. Oils and fats—animal, vegetable, &c.	585	190	2	15	792
III. Processes in stone, clay, glass, &c.	3,444	252	11	1,449	5,156
IV. Working in wood	3,251	901	65	1,392	5,609
V. Metal works, machinery, &c.	8,488	2,112	111	1,513	12,224
VI. Connected with food and drink, &c.	11,409	1,064	184	2,684	15,341
VII. Clothing and textile fabrics, &c.	22,425	1,010	155	1,281	24,871
VIII. Books, paper, printing, and engraving, &c.	6,202	313	58	642	7,215
IX. Musical instruments, &c.	410	.....	.....	.....	410
X. Arms and explosives	13	1	.....	.....	14
XI. Vehicles and fittings, saddlery, and harness, &c.	2,300	236	39	1,198	3,773
XII. Ship and boat building, &c.	1,684	43	.....	.....	1,727
XIII. Furniture, bedding, &c.	3,181	131	2	66	3,380
XIV. Drugs, chemicals, and by-products.....	1,163	2	.....	3	1,168
XV. Surgical and other scientific instruments	115	2	.....	.....	117
XVI. Jewellery and plated-ware, &c.	617	22	.....	11	650
XVII. Heat, light, and power	2,911	199	24	657	3,791
XVIII. Leatherware, n.e.i.	723	.....	.....	.....	723
XIX. Minor wares, n.e.i.	2,867	125	18	114	3,124
Total	74,027	6,660	675	11,290	92,652

METROPOLITAN DISTRICT RETURNS.

Table VIII.

Classification of Persons employed—1907–1916.

Year.	Number of Factories on Register.	Persons employed.								
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1907	2,840	2,233	2,082	4,122	4,023	32,802	12,958	39,157	19,063	58,22
1908	3,142	2,138	2,059	4,225	4,345	*35,306	*14,321	41,669	20,725	62,39
1909	3,396	2,104	2,309	4,221	4,477	37,547	15,613	43,872	22,399	66,27
1910	3,670	1,981	2,225	4,284	4,645	41,291	16,659	47,556	23,529	71,08
1911	3,843	2,033	2,406	4,277	4,694	45,775	18,320	52,085	25,420	77,50
1912	3,989	1,881	2,406	4,117	4,430	49,561	19,272	55,559	26,108	81,66
1913	4,322	1,892	2,405	3,976	4,442	52,023	19,467	57,891	26,314	84,20
1914	4,579	1,874	2,304	3,488	4,107	49,093	18,473	54,455	24,884	79,33
1915	4,758	2,324	2,549	3,912	4,276	48,655	19,613	54,891	26,438	81,32
1916	4,814	1,892	2,463	3,709	4,346	41,777	19,840	47,378	26,649	74,02

* Prior to 1908 the ages of hands up to 18 years only were collected. The form of return has now been altered so that the ages of persons between 18 a 21 years may be included, and are shown in the Tables dealing with age-groups of 1916.

The numbers of persons over 18 and under 21 years of age since 1908 are:—

	Males.	Females
1908	5,496	5,329
1909	5,786	5,764
1910	6,163	6,191
1911	6,316	6 554
1912	6,314	6,650
1913	6,239	6,533
1914	5,591	5,837
1915	5,200	6,123
1916	4,178	6,045

Table IX.

Horse-power of Machinery used—1907–1916.

Year.	Steam.		Gas.		Electricity and other.		Total.	
	No of Factories.	Horse-power.	No. of Factories.	Horse-power	No. of Factories.	Horse-power.	*No. of Factories.	Horse-power
1907	543	26,172	561	4,196	394	3,264	1,498	33,632
1908	539	29,071	578	4,390	481	4,052	1,598	37,513
1909	542	33,874	587	5,254	513	4,297	1,642	43,425
1910	518	36,829	708	10,247	888	9,833	2,114	56,909
1911	546	39,488	718	10,455	967	10,655	2,231	60,598
1912	502	49,500	737	10,861	1,446	16,768	2,673	77,129
1913	513	51,749	745	11,852	1,661	21,392	2,919	84,993
1914	504	56,157	719	11,886	2,068	26,983	3,291	95,043
1915	485	56,678	677	11,577	1,983	30,215	3,145	98,470
1916	416	59,432	592	10,137	‡2,654	‡39,098	3,662	108,667

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actu number of factories using power.
‡ Including 72 factories using oil of 1,285 horse-power.

Table X.

Classification of Factories according to Number of Persons employed—1907–1916.

Year.	Number of Factories in which the number of persons employed is—																To
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
1907	553	1,117	557	216	92	111	49	34	58	17	20	6	4	2	3	1	2,0
1908	732	1,183	567	242	108	104	51	40	52	25	20	7	5	1	3	2	3,2
1909	781	1,303	615	247	129	119	49	42	47	30	17	8	2	2	3	2	3,6
1910	838	1,426	668	254	124	120	72	41	58	27	21	7	4	5	2	3	3,7
1911	919	1,468	641	296	129	136	76	50	53	28	21	11	4	5	3	3	3,3
1912	942	1,497	686	311	146	147	64	49	66	35	19	11	7	4	2	3	3,9
1913	1,193	1,554	705	294	151	145	78	42	69	36	26	12	6	6	3	2	4,2
1914	1,692	1,410	693	277	134	136	65	40	57	25	26	10	3	3	4	4	4,7
1915	1,861	1,332	696	299	148	130	76	34	67	33	25	8	7	7	4	1	4,5
1916	2,189	1,247	638	266	109	140	58	37	61	25	20	9	2	7	5	1	4,4

TABLE XI.

Yearly Increase and Percentage of Increase of Persons employed in Age-groups—1907–1916.

Under 16 Years of Age.

ar.	Males.					Females.					Total.				
	Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.	
		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.
07	2,233	216	10·7	.....	.....	2,082	191	10·1	.....	.....	4,315	407	10·4	.....	.....
08	2,158	.....	.....	95	4·3	2,059	.....	.....	23	1·1	4,197	.....	.....	118	2·7
09	2,104	.....	.....	34	1·6	2,309	250	12·1	.....	.....	4,413	216	5·1	.....	.....
10	1,981	.....	.....	123	5·8	2,225	.....	.....	84	3·6	4,206	.....	.....	207	4·7
11	2,033	52	2·6	.....	.....	2,406	181	8·1	.....	.....	4,439	233	5·5	.....	.....
12	1,881	.....	.....	152	7·5	2,406	.....	.....	.....	.....	4,287	.....	.....	152	3·4
13	1,892	11	·6	.....	.....	2,405	.....	.....	1	·0	4,297	10	·0	.....	.....
14	1,874	.....	.....	18	·9	2,304	.....	.....	101	4·1	4,178	.....	.....	119	2·7
15	2,324	450	24·1	.....	.....	2,549	245	10·6	.....	.....	4,873	695	16·6	.....	.....
16	1,892	.....	.....	432	18·5	2,463	.....	.....	86	3·3	4,355	.....	.....	518	10·6

Between 16 and 18 Years of Age.

ar.	Males.					Females.					Total.				
	Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.	
		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.
07	4,122	82	2·0	.....	.....	4,023	319	8·6	.....	.....	8,145	401	5·2	.....	.....
08	4,225	103	2·5	.....	.....	4,345	322	8·0	.....	.....	8,570	425	5·2	.....	.....
09	4,221	.....	.....	4	·1	4,477	132	3·0	.....	.....	8,698	128	1·5	.....	.....
10	4,284	63	1·5	.....	.....	4,645	168	3·7	.....	.....	8,929	231	2·6	.....	.....
11	4,277	.....	.....	7	·2	4,694	49	1·1	.....	.....	8,971	42	·5	.....	.....
12	4,117	.....	.....	160	3·7	4,430	.....	.....	264	5·6	8,547	.....	.....	424	4·7
13	3,976	.....	.....	141	3·4	4,442	12	·0	.....	.....	8,418	.....	.....	129	1·4
14	3,488	.....	.....	488	12·2	4,107	.....	.....	335	7·5	7,595	.....	.....	823	9·7
15	3,912	424	12·1	.....	.....	4,276	169	4·1	.....	.....	8,188	593	7·8	.....	.....
16	3,709	.....	.....	203	5·1	4,346	70	1·6	.....	.....	8,055	.....	.....	133	1·6

Over 18 Years of Age.

ar.	Males.					Females.					Total.				
	Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.	
		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.
07	32,802	2,659	8·8	.....	.....	12,958	962	8·0	.....	.....	45,760	3,621	8·6	.....	.....
08	35,306	2,504	7·7	.....	.....	14,321	1,363	10·5	.....	.....	49,627	3,867	8·5	.....	.....
09	37,547	2,241	6·3	.....	.....	15,613	1,292	9·0	.....	.....	53,160	3,533	7·1	.....	.....
10	41,291	3,744	9·9	.....	.....	16,659	1,046	6·7	.....	.....	57,950	4,790	9·0	.....	.....
11	45,775	4,484	10·9	.....	.....	18,320	1,661	10·0	.....	.....	64,095	6,145	10·6	.....	.....
12	49,561	3,786	8·3	.....	.....	19,272	952	5·2	.....	.....	68,833	4,738	7·4	.....	.....
13	52,023	2,462	4·7	.....	.....	19,467	195	1·0	.....	.....	71,490	2,657	3·8	.....	.....
14	49,093	.....	.....	2,930	5·6	18,473	.....	.....	994	5·1	67,566	.....	.....	3,924	5·4
15	48,655	.....	.....	438	·9	19,613	1,140	6·2	.....	.....	68,268	702	1·3	.....	.....
16	41,777	.....	.....	6,878	14·1	19,840	227	1·1	.....	.....	61,617	.....	.....	6,651	9·7

All Employees.

ar.	Males.					Females.					Total.				
	Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.		Number employed.	Increase.		Decrease.	
		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.		Actual.	Per cent.	Actual.	Per cent.
07	39,157	2,957	8·2	.....	.....	19,063	1,472	8·4	.....	.....	58,220	4,429	8·2	.....	.....
08	41,669	2,512	6·4	.....	.....	20,725	1,662	8·7	.....	.....	62,394	4,174	7·2	.....	.....
09	43,872	2,203	5·3	.....	.....	22,399	1,674	8·1	.....	.....	66,271	3,877	6·2	.....	.....
10	47,556	3,684	8·4	.....	.....	23,529	1,130	5·0	.....	.....	71,085	4,814	7·2	.....	.....
11	52,085	4,529	9·5	.....	.....	25,420	1,891	8·0	.....	.....	77,505	6,420	9·0	.....	.....
12	55,559	3,474	6·7	.....	.....	26,108	688	2·7	.....	.....	81,667	4,162	5·4	.....	.....
13	57,891	2,332	4·0	.....	.....	26,314	206	·8	.....	.....	84,205	2,538	3·0	.....	.....
14	54,455	.....	.....	3,436	6·2	24,984	.....	.....	1,450	5·4	79,339	.....	.....	4,806	5·7
15	54,891	436	·8	.....	.....	26,438	1,554	6·2	.....	.....	81,329	1,990	2·5	.....	.....
16	47,378	.....	.....	7,513	13·6	26,649	211	0·7	.....	.....	74,027	.....	.....	7,302	8·9

METROPOLITAN DISTRICT—*continued.*

Table XII.

Percentages of Persons of each Sex in Age-groups to total Persons employed, 1912–16.

Year.	Under 16 years.				Over 16 and under 18 years.				Over 18 years.				Total.
	Males.		Females.		Males.		Females.		Males.		Females.		
	No.	Percentage.	No.	Percentage.	No.	Percentage.	No.	Percentage.	No.	Percentage.	No.	Percentage	
1912	1,881	2·3	2,406	3·0	4,117	5·0	4,430	5·4	49,561	60·7	19,272	23·6	81,667
1913	1,892	2·2	2,405	2·9	3,976	4·7	4,442	5·3	52,023	61·8	19,467	23·1	84,205
1914	1,874	2·4	2,304	2·9	3,488	4·4	4,107	5·1	49,093	61·9	18,473	23·3	79,339
1915	2,324	2·9	2,549	3·1	3,912	4·8	4,276	5·3	48,655	59·8	19,613	24·1	81,329
1916	1,892	2·6	2,463	3·3	3,709	5·0	4,346	5·9	41,777	56·4	19,840	26·8	74,027

Table XIII.

Number of Persons employed in each Class, 1916.

Class of Factory.	Number of Factories on Register.	Persons Employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		Over 21 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
I. Treating raw materials, product of pastoral pursuits	135	19	5	112	17	162	37	1,865	22	2,158	81	2,23
II. Oils and fats—animal, vegetable, &c.	22	16	9	33	11	57	45	338	76	444	141	58
III. Processes in stone, clay, glass, &c.	197	64	1	192	3	331	15	2,807	31	3,394	50	3,44
IV. Working in wood	371	118	...	212	1	332	...	2,583	5	3,245	6	3,25
V. Metal works, machinery, &c.	530	286	31	911	66	881	84	6,159	70	8,237	251	8,48
VI. Connected with food and drink, &c.	867	366	335	536	691	675	948	6,235	1,623	7,812	3,597	11,40
VII. Clothing and textile fabrics, &c.	1,102	295	1,570	481	2,654	411	3,574	4,376	9,064	5,563	16,862	22,42
VIII. Books, paper, printing, and engraving, &c.	331	286	304	315	505	298	629	2,872	993	3,771	2,431	6,20
IX. Musical instruments, &c.	19	28	1	25	11	37	4	297	7	387	23	41
X. Arms and explosives	6	...	...	1	...	2	...	10	...	13	...	1
XI. Vehicles and fittings, saddlery and harness, &c.	294	81	2	218	11	256	16	1,676	40	2,231	69	2,30
XII. Ship and boat building, &c.	32	6	...	113	...	93	...	1,465	7	1,677	7	1,68
XIII. Furniture, bedding, &c.	267	104	20	220	53	238	88	2,202	256	2,764	417	3,18
XIV. Drugs, chemicals, and by-products	98	40	76	50	128	42	153	431	243	563	600	1,16
XV. Surgical and other scientific instruments	22	4	5	7	4	7	6	70	12	88	27	11
XVI. Jewellery and plated-ware, &c.	72	34	4	43	12	46	12	427	39	550	67	61
XVII. Heat, light, and power	147	31	...	135	12	164	21	2,534	14	2,864	47	2,91
XVIII. Leatherware, n.e.i.	36	50	28	41	42	62	70	364	66	517	206	72
XIX. Minor wares, n.e.i.	266	64	72	64	125	84	343	888	1,227	1,100	1,767	2,86
Total	4,814	1,892	2,463	3,709	4,346	4,178	6,045	37,599	13,795	47,378	26,649	74,0

Table XIV.

Horse-power of Machinery used in each Class, 1916.

Class o Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actual used.
I. Treating raw materials, product of pastoral pursuits	61	1,949	1,362	31	822	357	61	2,251	1,63
II. Oils and fats—animal, vegetable, &c.	9	697	330	1	12	10	8	992	85
III. Processes in stone, clay, glass, &c.	53	5,846	3,474	27	2,001	1,229	78	4,117	3,19
IV. Working in wood	78	3,631	2,844	68	1,114	818	201	7,015	5,88
V. Metal works, machinery, &c.	42	3,820	2,769	92	2,474	1,664	362	6,614	4,97
VI. Connected with food and drink, &c.	81	12,391	8,123	99	2,075	1,705	450	9,008	7,56
VII. Clothing and textile fabrics, &c.	16	1,779	1,464	54	1,342	1,040	510	3,620	3,21
VIII. Books, paper, printing, and engraving, &c.	5	1,379	1,062	46	892	695	257	4,743	3,58
IX. Musical instruments, &c.	1	1	1	1	70	70	12	349	34
X. Arms and explosives	...	...	.....	...	.....	.....	5	38	1
XI. Vehicles and fittings, saddlery and harness, &c.	10	2,193	130	31	240	151	154	1,068	9
XII. Ship and boat building, &c.	9	2,216	2,026	4	42	37	16	824	61
XIII. Furniture, bedding, &c.	3	201	181	20	370	270	167	2,026	1,77
XIV. Drugs, chemicals, and by-products	11	276	175	11	449	229	56	1,007	7
XV. Surgical and other scientific instruments	...	...	.....	...	.....	.....	20	45	2
XVI. Jewellery and plated-ware, &c.	...	...	.....	3	44	32	55	309	2
XVII. Heat, light, and power	14	45,360	34,905	63	1,992	1,527	78	3,157	2,22
XVIII. Leatherware, n.e.i.	2	130	86	5	114	97	25	214	1
XIX. Minor wares, n.e.i.	21	590	500	36	279	206	139	1,172	1,0
Total	416	80,459	59,432	592	14,332	10,137	2,654	48,569	39,0

METROPOLITAN DISTRICT—*continued.*

Table XV.

Classification of Factories according to Number of Persons employed—1916.

Class of Factory.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
I. Treating raw material, product of pastoral pursuits	58	39	16	8	2	4	1	3	1	2	...	...	1	...	...	...	135
II. Oils and fats—animal, vegetable, &c.	8	6	6	...	...	1	...	...	...	...	...	...	...	1	...	...	22
III. Processes relating to stone, clay, glass, &c.	81	39	31	24	9	8	...	1	1	...	1	1	...	1	...	...	197
IV. Working in wood	221	92	33	13	3	...	1	1	4	1	2	...	...	...	...	...	371
V. Metal works, machinery, &c.	216	147	84	28	11	15	11	6	3	7	...	1	...	...	1	...	530
VI. Connected with food and drink, &c.	546	163	69	30	11	17	6	2	11	2	4	1	...	4	1	...	867
VII. Clothing and textile fabrics, &c.	393	305	155	76	30	56	24	17	22	10	7	4	1	1	1	...	1,102
VIII. Books, paper, printing, engraving, &c.	105	88	70	19	17	10	4	5	8	2	2	1	...	...	...	...	331
IX. Musical instruments, &c.	6	4	5	1	2	...	...	...	...	...	1	...	...	...	...	...	19
X. Arms and explosives	4	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
XI. Vehicles and fittings, saddlery, harness, &c.	128	104	36	13	5	5	2	...	1	...	...	...	...	...	...	...	294
XII. Ship and boat building, &c.	9	7	6	2	1	2	3	...	1	...	...	...	...	..	...	1	32
XIII. Furniture, bedding, &c.	104	78	47	20	4	6	1	...	6	...	1	...	...	...	...	...	267
XIV. Drugs, chemicals, and by-products	35	35	17	2	2	5	...	1	...	...	1	...	...	...	...	...	98
XV. Surgical and other scientific instruments	12	7	2	1	...	...	...	...	...	...	...	...	...	...	...	...	22
XVI. Jewellery and plated-ware, &c.	30	23	13	1	2	3	...	...	...	...	...	...	...	...	...	...	72
XVII. Heat, light, and power	106	17	6	6	3	3	2	...	1	...	1	..	...	...	2	...	147
XVIII. Leatherware (excepting saddlery and harness)	11	8	8	4	2	1	...	...	1	1	...	...	...	...	..	...	36
XIX. Minor wares not elsewhere included	116	83	34	18	5	4	3	1	1	...	...	1	...	...	...	...	266
Total	2,189	1,247	638	266	109	140	58	37	61	25	20	9	2	7	5	1	4,814

Table XVI.

Number of Persons employed in each Class—1912–16.

Class of Factory.	1912.	1913.	1914.	1915.	1916.
I. Treating raw material, product of pastoral pursuits	1,945	2,241	1,810	2,266	2,239
II. Oils and fats—animal, vegetable, &c.	666	698	737	723	585
III. Processes relating to stone, clay, glass, &c.	4,177	4,653	4,598	4,223	3,444
IV. Working in wood	4,518	4,435	4,214	3,847	3,251
V. Metal works, machinery, &c.	11,850	12,275	10,980	10,889	8,488
VI. Connected with food and drink, &c.	11,015	12,277	11,667	12,744	11,409
VII. Clothing and textile fabrics, &c.	23,530	23,427	22,250	22,956	22,425
VIII. Books, paper, printing, engraving, &c.	6,405	6,752	6,156	6,465	6,202
IX. Musical instruments, &c.	422	390	363	339	410
X. Arms and explosives	33	37	44	17	13
XI. Vehicles and fittings, saddlery, harness, &c.	2,756	2,896	2,679	2,645	2,300
XII. Ship and boat building, &c.	2,134	1,904	1,953	1,792	1,684
XIII. Furniture, bedding, &c.	3,994	4,080	3,563	3,533	3,181
XIV. Drugs, chemicals, and by-products	1,152	1,293	1,236	1,397	1,163
XV. Surgical and other scientific instruments	105	107	109	92	115
XVI. Jewellery and plated-ware, &c.	782	716	617	552	617
XVII. Heat, light, and power	2,810	2,810	3,504	3,300	2,911
XVIII. Leatherware (excepting saddlery and harness)	484	535	524	646	723
XIX. Minor wares not elsewhere included	2,889	2,679	2,335	2,903	2,867
Total	81,667	84,205	79,339	81,329	74,027

Table XVII.

Increase or decrease in number of Factories and of Persons employed—1906–16.

Year.	Factories.		Persons employed.															
			Under 16 years.				Over 16 years and under 18 years.				*Over 18 years.				Total.			
	Gain.	Loss.	Gain.		Loss.		Gain.		Loss.		Gain.		Loss.		Gain.		Loss.	
			M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1906	110	...	224	392	...	...	267	234	...	...	2,272	1,218	...	...	2,763	1,844	...	...
1907	50	...	216	191	...	...	82	319	...	...	2,659	962	...	...	2,957	1,472	...	...
1908	302	...	...	...	95	23	103	322	...	...	2,504	1,363	...	...	2,512	1,662	...	...
1909	254	...	...	250	34	...	..	132	4	...	2,241	1,292	...	...	2,203	1,674	...	...
1910	274	...	...	...	123	84	63	168	...	...	3,744	1,046	...	...	3,684	1,130	...	...
1911	173	...	52	181	...	...	...	49	7	...	4,484	1,661	...	...	4,529	1,891	...	...
1912	146	...	...	..	152	...	...	...	160	264	3,786	952	..	..	3,474	688	...	...
1913	333	...	11	..	...	1	...	12	141	...	2,461	195	...	...	2,332	206	...	...
1914	257	...	...	...	18	101	...	...	488	335	...	...	2,930	994	...	...	3,436	1,430
1915	179	...	450	245	...	...	424	169	...	...	...	1,140	438	...	436	1,554	...	...
1916	56	...	...	...	432	86	...	70	203	...	...	227	6,878	...	...	211	7,513	...

* See foot-note to Table VIII.

METROPOLITAN DISTRICT—*continued.*

TABLE XVIII.

Number of Persons Employed in some of the most important Industries—1912-16.

Class of Factory.	1912.	1913.	1914.	1915.	1916.	Class of Factory.	1912.	1913.	1914.	1915.	1916.
Boiling-down	159	252	149	101	56	Boots and shoes—Factory made	3,696	3,693	3,564	3,209	3,588
Tanneries	693	730	743	809	708	Clothing—Men's slops	3,523	3,103	3,108	3,158	3,320
Wool-scouring and fell mongering	839	952	660	1,162	1,313	Women's slops	2,084	2,311	1,919	2,029	2,063
Soap and candles	369	372	403	479	503	Tailoring	3,437	3,917	3,447	3,720	3,173
Bricks and tiles	1,977	2,171	2,016	1,490	1,293	Dressmaking—					
Glass bottles	783	811	850	1,178	953	Makers' materials	2,818	2,573	2,569	2,668	2,690
Pottery and earthenware	470	427	382	368	328	Customers' materials	1,172	1,234	1,019	916	861
Boxes and packing cases	511	614	532	627	542	Hats and caps	1,515	1,428	1,454	1,338	1,286
Joinery	1,708	1,585	1,759	1,493	1,204	Oilskins and waterproofs	151	94	65	79	94
Saw-mills—Timber	1,701	1,593	1,358	1,188	1,064	Shirts, ties, and scarfs	1,693	1,609	1,602	1,489	1,464
Brass and copper works	572	487	462	389	326	Underclothing	1,027	891	713	838	800
Engineering	4,573	4,735	4,457	4,387	3,808	Rope and twine	269	240	240	268	261
Ironworks and foundries, &c.	1,272	1,279	1,217	1,177	830	Paper bags and boxes	754	661	586	658	633
Railway carriage-works	1,355	1,448	1,097	1,029	340	Paper-mills	138	241	208	329	271
Tin-smithing	954	914	822	939	960	Printing, bookbinding, &c.	4,793	5,152	4,763	4,714	4,387
Wire-works	532	535	490	405	310	Pianos and sewing-machines	422	390	333	339	410
Meat-preserving	1,018	1,387	1,223	945	699	Coaches and waggons	1,171	1,272	1,257	1,190	839
Biscuits	950	1,098	993	1,090	1,148	Cycles and motor cars	872	939	837	925	951
Bread and pastry	1,598	1,657	1,637	2,302	1,582	Saddlery and harness	505	482	425	391	382
Confectionery	747	815	785	960	874	Docks and slips	1,561	1,183	1,289	1,223	1,134
Flour-mills	212	263	247	264	275	Ship and boat building	542	679	626	510	531
Jam and fruit preserving	474	523	456	355	476	Bedding, flock, and upholstery	805	1,009	842	770	729
Sugar-refining	547	624	692	586	563	Furniture—European	1,338	1,415	1,215	1,551	1,358
Aerated waters and cordials	696	711	523	667	379	Chinese	862	749	572	431	343
Breweries	761	792	711	790	863	Chemical works and drug-	839	857	845	970	792
Condiments, coffee, and spices	654	711	503	670	651	Electric light and power	263	292	298	410	349
Ice and refrigerating	482	653	496	610	328	Jewellery	620	558	478	446	482
Tobacco, cigars, and cigarettes	1,418	1,480	1,738	1,823	1,850	Gas-works	1,734	1,668	2,471	2,033	2,009
Woollen-mills	841	1,020	1,058	1,130	1,042	Laundries—European	1,888	1,744	1,499	1,981	1,632
						Chinese	29	31	32	22	35

TABLE XIX.

Number of Factories on Register, and Persons employed in each Trade—1916.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 1.—TREATING RAW MATERIAL, THE PRODUCT OF PASTORAL PURSUITS.												
1. *Animal Products.*												
Boiling-down and tallow-refining	9	...	.....	...	.....	2	.....	54	.....	56	.....	56
Glue	1	...	.....	...	2	...	.....	9	7	9	9	18
Tanneries	64	8	.....	36	.....	43	.....	621	.....	708	.....	708
Wool-scouring and fellmongering	18	8	3	65	14	108	27	1,073	15	1,254	59	1,313
Other animal products	11	2	.....	7	.. .	6	... ..	40	.....	55	.....	55
Total, Sub-class 1	103	18	3	108	16	159	27	1,797	22	2,082	68	2,150
2. *Vegetable Products.*												
Chaff-cutting	32	1	2	4	1	3	10	68	.....	76	13	89
Total, Class 1	135	19	5	112	17	162	37	1,865	22	2,158	81	2,239
CLASS 2.—OILS AND FATS—ANIMAL AND VEGETABLE.												
Oil and grease	9	1	2	8	.....	10	.....	57	4	76	6	82
Soap, candles, &c.	13	15	7	25	11	47	45	281	72	368	135	503
Total, Class 2	22	16	9	33	11	57	45	338	76	444	141	585
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &C.												
Asphalt	5	...	.....	...	.....	...	.....	39	.....	39	.....	39
Bricks and tiles	65	33	.....	37	.....	49	9	1,145	20	1,264	29	1,293
Glass and glass bottles	9	10	1	90	1	204	1	645	1	949	4	953
Glass (ornamental)	21	6	.....	22	.....	18	.....	154	1	200	1	201
Lime, plaster, and cement	3	...	.....	...	.....	7	.....	131	.....	138	.....	138
Marble and slate	12	1	.....	7	.....	6	.....	100	.....	114	.....	114
Modelling and fibrous plaster	18	...	.....	7	.....	14	.....	67	.....	88	... ..	88
Monumental masonry	22	...	.....	4	.....	3	.....	124	.....	131	.....	131
Pottery and earthenware	15	14	.....	21	2	25	5	252	9	312	16	328
Stone-dressing	23	...	.....	1	.....	4	.....	137	.....	142	.. ...	142
Other works	4	...	.....	3	.....	1	.....	13	.....	17	.....	17
Total, Class 3	197	64	1	192	3	331	15	2,807	31	3,394	50	3,444

METROPOLITAN DISTRICT—*continued.*

TABLE XIX—*continued*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 4.—WORKING IN WOOD.												
elhives, &c.	1	...	.....	...	.....	...	.....	3	.....	3	.....	3
xes and packing-cases	40	30	.....	36	.....	71	.....	402	3	539	3	542
operage ...	10	2	.....	3	.....	12	.....	149	.....	166	.....	166
inery	189	33	.....	91	1	146	.....	931	2	1,201	3	1,204
w-mills—Timber	52	47	.. ...	69	.....	90	.....	858	.....	1,064	.....	1,064
Firewood	51	1	.....	...	.....	3	.....	107	.....	111	.....	111
ood-turning	17	5	.....	11	.....	4	.....	56	.....	76	.....	76
her works	11	...	.....	2	.....	6	.....	77	.....	85	.....	85
Total, Class 4 ...	371	118	.....	212	1	332	.....	2,583	5	3,245	6	3,251
CLASS 5.—METAL WORKS, MACHINERY, &c.												
ricultural implements	15	14	.....	35	.....	22	.....	232	.....	303	.....	303
ss and copper	33	16	1	40	.. ...	32	1	236	.....	324	2	326
tlery	19	1	.....	5	.....	8	.. ...	45	.. ...	59	.....	59
gineering	181	94	.....	516	.....	437	2	2,759	.....	3,806	2	3,808
lvanized iron	33	10	.....	24	... ..	28	.....	236	.....	298	.....	298
n works, foundries, and boiler-making	78	23	.....	61	.....	46	.....	700	.....	830	.....	83 0
n safes and doors	3	1	.....	...	.....	1	.....	10	.....	12	. ....	1 2
ad-mills	1	...	.....	...	.....	...	.....	12	.....	12	.....	1 2
ilway carriage works	4	10	.....	36	.....	52	.....	242	.....	340	.....	34 0
elting and ore dressing	6	...	.....	...	.....	1	.....	52	.....	53	... ..	5 3
ves and ovens	13	8	.....	34	.....	30	.....	248	.....	320	.....	320
n-smithing	20	61	30	62	66	108	79	489	65	720	240	960
re-working	14	17	.....	28	.....	30	2	232	1	307	3	310
ner metal works	53	25	.....	48	.....	61	.....	435	3	569	3	572
mbers	24	5	.....	15	.. ...	20	.....	146	1	186	1	187
rriers	33	1	.....	7	.....	5	.....	85	.....	98	.....	98
Total, Class 5	530	286	31	911	66	881	84	6,159	70	8,237	251	8,488
ASS 6.—CONNECTED WITH FOOD ND DRINK, AND THE PREPARATION HEREOF.												
1. *Animal Food.*												
con	8	...	.....	4	.....	1	.....	77	.....	82	.....	82
tchers' small-goods	221	2	.....	6	.....	23	.....	479	.....	510	.....	510
rgarine	3	...	.. ...	1	.....	6	. ....	24	.....	31	.....	31
at-preserving	9	6	3	18	4	38	25	551	54	613	86	699
Total, Sub-class 1	241	8	3	29	4	68	25	1,131	54	1,236	86	1,322
Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.												
scuits	10	131	112	63	146	40	196	238	222	472	676	1,148
ead and pastry	287	36	2	128	12	118	24	1,224	40	1,506	78	1,584
nfectionery	89	27	56	42	168	30	162	249	140	348	526	874
rn-flour and oatmeal	10	7	4	2	9	7	32	142	42	158	87	245
our-mills	13	3	.....	12	.....	28	.....	232	.....	275	.....	275
n and fruit preserving	17	17	4	17	14	40	20	204	160	278	198	476
kles, sauces, and vinegar	14	...	2	6	10	11	25	52	54	69	91	160
ultry foods and dog biscuits	4	1	.....	3	.....	5	1	9	4	18	5	23
f-raising flour	6	...	1	5	9	...	23	11	17	16	50	66
gar-refining	2	13	6	23	15	38	22	434	17	508	60	568
Total, Sub-class 2	452	235	187	301	383	317	505	2,795	696	3,648	1,771	5,419
3. *Drinks and Stimulants.*												
rated waters and cordials	30	3	.....	43	18	51	17	218	29	315	64	379
ewcries	6	1	.....	17	.....	94	.....	751	.....	863	.....	863
diments, coffee, spices, &c.	34	14	27	21	66	22	82	187	232	244	407	651
stillery	1	...	.....	...	.....	...	.....	45	.....	45	.....	45
and refrigerating	45	3	.....	4	.....	13	.....	308	.....	328	.....	328
blending and packing	21	34	33	23	37	23	42	102	43	182	155	337
ne, spirits, and beer bottling	23	...	.....	18	.....	29	8	127	33	174	41	215
Total, Sub-class 3	160	55	60	126	121	232	149	1,738	337	2,151	667	2,818
4. *Narcotics.*												
bacco, cigars, and cigarettes	14	68	85	80	183	58	269	571	536	777	1,073	1,850
Total, Class 6	867	366	335	535	691	675	948	6,235	1,623	7,812	3,597	11,409

METROPOLITAN DISTRICT—*continued.*

TABLE XIX—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
1. *Textile.*												
Woollen mills	6	33	103	35	124	46	130	309	262	423	619	1,04
2. *Dress.*												
Boots and shoes:—Order made	144	18	5	19	6	10	7	314	34	361	52	41
Factory made	79	138	243	115	261	91	289	1,709	742	2,053	1,535	3,58
Clothing:—Men's slops	88	15	199	32	440	25	648	526	1,435	598	2,722	3,32
Women's slops	71	12	130	27	200	46	332	156	1,160	241	1,822	2,06
Tailoring	223	13	114	37	290	51	442	650	1,574	751	2,420	3,17
Corsets	8	1	10	1	22	1	34	6	92	9	158	16
Dressmaking and millinery:—												
Makers' material	110	2	275	2	423	3	555	31	1,399	38	2,652	2,69
Customers' material	174	1	86	7	150	8	177	7	425	23	838	86
Dye works	16	2	.....	2	4	4	17	40	40	48	61	10
Furriers	7	3	8	...	9	...	9	13	22	16	48	6
Hats and caps	38	21	66	61	160	48	210	296	424	426	860	1,28
Hosiery and knitting	19	3	52	6	107	6	113	27	176	42	448	49
Oilskin and waterproof clothing	5	...	10	1	16	1	23	9	34	11	83	9
Shirts, ties, and scarfs	35	9	154	10	228	11	309	51	692	81	1,383	1,46
Umbrellas	5	8	2	6	7	1	28	18	38	33	75	10
Underclothing	40	2	81	1	137	...	188	12	379	15	785	80
Wigs and hair work	5	...	1	...	4	...	6	4	11	4	22	2
Total, Sub-class 2	1,067	248	1,436	327	2,464	306	3,387	3,869	8,677	4,750	15,964	20,7
3. *Fibrous Materials and Textiles not elsewhere included.*												
Bags and sacks	10	3	25	12	53	11	43	72	68	98	189	28
Rope and twine	10	8	3	100	2	41	3	92	12	241	20	26
Tents and tarpaulins	9	3	3	7	11	7	11	34	45	51	70	12
Total, Sub-class 3	29	14	31	119	66	59	57	198	125	390	279	6
Total, Class 7	1,102	295	1,570	481	2,654	411	3,574	4,376	9,064	5,563	16,862	22,4
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	13	6	.....	5	2	5	8	45	11	61	21	
Electrotyping and stereotyping, type founding, and printers' materials.	10	8	7	4	9	9	8	44	5	65	29	
Paper bags and boxes	15	37	89	16	120	11	114	83	168	147	491	6
Paper mills, cardboard, and straw-board	7	8	8	15	18	11	19	167	25	201	70	2
Photo.-engraving, photo.-lithography, and photo. materials	38	22	27	27	97	21	112	186	238	256	474	7
Printing, bookbinding, and manufacturing stationery	248	205	173	248	259	241	368	2,347	546	3,041	1,346	4,3
Total, Class 8	331	286	304	315	505	298	629	2,872	993	3,771	2,431	6,2
CLASS 9.—MUSICAL INSTRUMENTS, &C.												
Pianos, organs, and sewing-machines	19	28	1	25	11	37	4	297	7	387	23	4
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	6	...	...	1	.....	2	.....	10	.....	13	.....	
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY, HARNESS, &C.												
Coaches and waggons	114	22	.....	70	.....	105	.....	632	...	829	.....	8
Cycles and motor cars	131	43	1	127	2	109	3	654	12	933	18	9
Perambulators, &c.	3	7	...	2	.....	3	.....	35	2	47	2	
Saddlery, harness, &c.	35	8	1	16	9	19	13	291	25	334	48	3
Naves, spokes, &c.	6	...	.....	3	.....	19	.....	52	.....	74	.....	1
Whips	5	1	.....	...	.....	1	.....	12	1	14	1	5
Total, Class 11	294	81	2	218	11	256	16	1,676	40	2,231	69	2,3
CLASS 12.—SHIPBUILDING, FITTINGS, &C.												
Docks and slips	4	2	.....	83	.....	50	.....	999	.....	1,134	.....	1,
Sailmaking	4	...	.....	1	.....	1	.....	20	7	22	7	
Ship and boat building	24	4	...	29	.....	42	.....	446	.....	521	.....	
Total, Class 12	32	6	...	113	.....	93	.....	1,465	7	1,677	7	1,

METROPOLITAN DISTRICT—*continued.*

TABLE XIX.—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 13.—FURNITURE, BEDDING, &c.												
dding, flock, and upholstery	40	25	12	41	38	42	69	338	164	446	283	729
rpet-sewing	4	...	3	1	2	...	1	18	38	19	44	63
n bedsteads	4	21	.....	18	.....	18	.....	238	.....	295	.....	295
lliard tables	3	2	.....	7	.....	4	.....	50	.....	63	.....	63
air-making	9	1	.....	11	1	8	.....	60	1	80	2	82
rniture and cabinet making—												
European	124	38	3	126	5	151	15	987	33	1,302	56	1,358
Chinese	49	...	.....	2	.....	...	.....	341	.....	343	.....	343
Bamboo and wicker	9	4	.....	4	.....	5	.....	75	.....	88	.....	88
cture frames	20	13	2	9	7	8	3	66	20	96	32	128
indow blinds	5	...	.....	1	.....	2	.....	29	.....	32	.....	32
Total, Class 13	267	104	20	220	53	238	88	2,202	256	2,764	417	3,181
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
king powder, blue, soda, &c.	15	2	24	1	24	2	23	47	37	52	108	160
emical works and drugs	52	29	49	36	97	29	119	240	193	334	458	792
rtilisers	8	...	.....	...	.....	...	.....	60	.....	60	.....	60
rfumes and essences	5	3	2	2	3	4	6	5	9	14	20	34
nts and varnishes	17	6	1	11	4	7	5	73	4	97	14	111
her Minor Works	1	...	.....	...	.....	...	.....	6	.....	6	.....	6
Total, Class 14	98	40	76	50	128	42	153	431	243	563	600	1,163
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
tical instruments	16	1	4	5	2	5	6	51	3	62	15	77
rgical instruments	5	3	1	2	2	1	.....	18	9	24	12	36
her Minor Works	1	...	.....	...	.....	1	.....	1	.....	2	.....	2
Total, Class 15	22	4	5	7	4	7	6	70	12	88	27	115
CLASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.												
ectroplating	17	4	.....	12	3	11	5	94	6	121	14	135
wellery	55	30	4	31	9	35	7	333	33	429	53	482
Total, Class 16	72	34	4	43	12	46	12	427	39	550	67	617
CLASS 17.—LIGHT, HEAT, AND POWER.												
ectrical apparatus	34	12	.....	79	.....	72	.....	154	.....	317	.....	317
ectrical light and power works	98	...	.....	21	.....	16	2	309	1	346	3	*349
s works	6	14	.....	24	.....	69	.....	1,902	.....	2,009	.....	2,009
mps and gas mantles	5	5	.....	4	12	4	19	49	13	62	44	106
draulic power	2	...	.....	...	.....	...	.....	33	.....	33	.....	33
ke works	2	...	.....	7	.....	3	.....	87	.....	97	.....	97
Total, Class 17	147	31	.....	135	12	164	21	2,534	14	2,864	47	2,911
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
ncy leather	15	23	14	11	18	19	34	152	29	205	95	300
ather belting	5	5	.....	7	.....	16	.....	62	.....	90	.....	90
rtmanteaux	16	22	14	23	24	27	36	150	37	222	111	333
Total, Class 18	36	50	28	41	42	62	70	364	66	517	206	723
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
skets, wickerware, mats, matting	5	...	.....	...	.....	...	.....	115	22	115	22	137
ooms, brushes	25	14	6	15	10	13	17	113	24	155	57	212
rists and seedsmen	4	7	9	3	8	4	2	36	2	50	21	71
undries—European	160	...	36	3	88	10	276	148	1,071	161	1,471	1,632
Chinese	26	...	.....	...	.....	...	.....	30	5	30	5	35
bber goods	5	11	19	13	10	33	40	236	94	293	163	456
ys	15	5	.....	5	1	3	.....	15	28	28	1	29
inting and sign-writing	11	6	.....	10	.....	18	.....	115	.....	149	.....	149
her Minor Works	21	21	2	15	8	3	8	80	9	119	27	146
Total, Class 19	266	64	72	64	125	84	343	888	1,227	1,100	1,767	2,867

*These figures include 89 electric lighting plants for picture shows, employing 104 hands.

Charitable institutions doing outside laundry work are now included in the number of factories registered. The persons engaged in laundry work in these institutions at the end of 1916, are, however, not included in the number of hands employed in laundries.

METROPOLITAN DISTRICT—*continued.*

TABLE XX.

Horse-power of Machinery used in each Trade, 1916.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 1.—TREATING RAW MATERIALS, &c.									
Boiling-down and tallow refining	7	159	87	1	120	60	4	132	107
Glue	1	18	18	...	.....	.....	1	41	41
Tanneries	40	783	576	16	408	220	22	500	314
Woolscouring and fellmongering and packing skins	11	861	673	3	222	17	18	1,341	962
Chaff-cutting	2	128	8	11	72	60	16	237	208
Total	61	1,949	1,362	31	822	357	61	2,251	1,632
CLASS 2.—OILS AND FATS.									
Oil and grease	4	73	49	1	12	10	3	49	23
Soap and candles	5	624	281	...	.....	.....	5	943	835
Total	9	697	330	1	12	10	8	992	858
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.									
Asphalt	...	.....	.....	...	.....	.....	4	68	56
Bricks and tiles	38	5,468	3,145	15	1,530	923	19	2,458	1,888
Glass and glass bottles	1	100	100	2	74	9	7	288	256
Glass (ornamental)	1	10	4	...	.....	.....	11	153	125
Cement	...	... ..	... ..	...	.....	.. ...	2	392	305
Marble and slate	1	30	20	3	103	91	8	254	176
Modelling and fibrous plaster	...	.....	.....	1	4	4	10	48	43
Monumental masons	1	8	6	1	12	10	3	68	41
Pottery and earthenware	4	75	62	5	278	192	4	108	93
Stone-dressing	6	143	127	...	.....	.....	7	228	165
Other works	1	12	10	...	.....	.....	3	52	42
Total	53	5,846	3,474	27	2,001	1,229	78	4,117	3,190
CLASS 4.—WORKING IN WOOD.									
Incubators	...	.....	.....	...	.....	.....	1	2	2
Boxes and packing-cases	2	435	215	4	154	121	33	1,036	708
Cooperage	2	33	19	2	86	76	6	96	71
Joinery	10	478	299	46	656	441	110	2,343	2,026
Saw-mills—timber	30	2,184	1,905	4	99	92	22	3,062	2,744
,, firewood	31	316	271	6	78	55	10	96	91
Wood-turning	2	65	35	3	8	7	11	125	81
Other works	1	120	100	3	33	26	8	255	160
Total	78	3,631	2,844	68	1,114	818	201	7,015	5,883
CLASS 5.—METAL WORKS, MACHINERY, &c.									
Agricultural implements	...	.....	.....	6	101	57	5	107	102
Brass and copper	2	254	88	5	52	36	25	144	119
Cutlery	...	.....	.....	...	.....	.....	17	155	131
Engineering	24	2,459	1,772	36	938	686	138	2,903	2,152
Galvanized iron	2	20	18	3	30	29	14	159	147
Iron works, foundries, and boiler-making	9	511	423	19	409	300	53	1,167	957
Iron safes and doors	...	.....	.....	...	.....	.....	3	10	10
Lead-mills	1	100	90	...	.....	.....	1	35	25
Railway carriage works	2	346	272	2	191	40	4	209	85
Smelting and ore-dressing	1	14	14	...	.. ...	.....	3	209	197
Stoves and ovens	...	.....	.....	5	185	153	7	161	153
Tinsmithing	1	116	92	5	141	81	11	299	190
Wire-working	...	.....	.....	1	40	36	14	559	346
Other metal works	...	.....	.....	6	379	238	42	436	303
Plumbers	...	.....	.....	3	6	6	5	21	21
Farriers	...	.....	.....	1	2	2	20	40	34
Total	42	3,820	2,769	92	2,474	1,664	362	6,614	4,972
CLASS 6.—CONNECTED WITH FOOD AND DRINK, &c.									
Bacon	3	135	106	...	.....	.....	5	68	59
Butchers' small-goods	12	228	154	36	235	189	165	1,000	910
Margarine	1	23	23	1	52	35	1	60	19
Meat-preserving	7	1,265	704	1	10	10	4	401	173
Biscuits	3	675	502	1	30	26	4	579	452
Bread and pastry	4	73	11	18	106	82	26	655	554
Confectionery	3	33	27	6	111	94	43	579	396
Corn-flour and oatmeal	2	75	73	1	5	5	7	374	338
Flour-mills	9	1,895	1,593	2	189	155	4	76	67
Jam and fruit preserving	4	54	48	1	27	20	7	232	170
Pickles, sauces, and vinegar	2	24	18	1	3	3	7	29	17
Dog biscuits and poultry foods	1	4	.....	...	.....	.....	3	18	18
Self-raising flour	...	.....	.....	1	3	2	5	57	42
Sugar	1	606	596	...	.....	.....	1	2,008	2,008
Aerated waters	6	38	20	8	67	41	19	376	338
Breweries	3	3,023	1,598	1	14	10	2	755	532
Condiments, Eastern goods, &c.	2	413	327	3	42	41	23	280	239
Distillery	1	37	37	...	.....	.....	2	253	253
Ice and refrigerating	12	3,082	1,747	15	1,126	949	26	597	437
Tea-blending	1	44	44	...	.....	.....	16	120	108
Tobacco, cigars, and cigarettes	2	648	486	..	.....	.....	8	633	379
Wines and spirits	2	16	9	2	55	43	8	58	54
Total	81	12,391	8,123	99	2,075	1,705	450	9,008	7,563

METROPOLITAN DISTRICT—*continued.*

TABLE XX—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, &c.									
Woollen mills	4	1,006	913	1	220	200	2	700	687
Boots and shoes	1	100	50	33	625	481	174	860	752
Clothing—men's slops	1	8	8	1	8	8	66	443	412
,, women's slops	...	.....	.....	1	3	3	53	167	151
,, tailoring	...	.....	.....	...	.....	.....	44	76	72
Corsets	...	.....	.....	...	.....	.....	5	19	19
Dressmaking	1	10	10	1	35	35	27	185	163
Dye works	3	27	16	3	12	10	5	33	27
Furriers	...	.....	.....	1	1	1	2	19	16
Hats and caps	5	444	327	3	23	20	30	365	312
Hosiery, knitting, &c.	...	.....	.....	2	29	5	15	125	97
Oilskins and waterproof clothing	...	.....	.....	...	.....	.....	5	22	22
Shirts, ties, and scarfs	...	.....	.....	3	43	36	33	186	179
Umbrellas	...	.....	.....	...	.....	.....	4	13	12
Underclothing	...	.....	.....	...	.....	.....	30	91	86
Bags and sacks	...	.....	.....	1	6	6	4	101	86
Rope and twine	1	184	140	3	329	227	5	199	106
Tents and tarpaulins	...	.....	.....	1	8	8	6	16	11
Total	16	1,779	1,464	54	1,342	1,040	510	3,620	3,210
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.									
Die-sinking and engraving	...	.....	.....	...	.....	.....	12	54	45
Electro- and stereo-typing, printers' materials, &c.	...	.....	.....	...	.....	.....	9	139	111
Paper bags and boxes	1	105	75	1	16	14	13	327	273
Paper-mills	2	1,260	975	...	.....	.....	2	543	345
Photo-engraving, photo materials, &c.	...	.....	.....	...	.....	.....	12	126	117
Printing, bookbinding, and stationery	2	14	12	45	876	681	209	3,554	2,695
Total	5	1,379	1,062	46	892	695	257	4,743	3,586
CLASS 9.—MUSICAL INSTRUMENTS, &c.									
Pianos and sewing-machines	1	1	1	1	70	70	12	349	347
CLASS 10.—ARMS AND EXPLOSIVES.									
Explosives	..	.....	.....	...	.....	.....	5	38	11
CLASS 11.—VEHICLES, SADDLERY, HARNESS, &c.									
Coaches and waggons	4	40	30	8	80	63	42	465	401
Cycles and motor-cars	1	8	.....	20	137	77	92	438	381
Perambulators	...	.....	.....	1	3	3	2	5	5
Saddlery and harness	...	.....	.....	1	12	8	14	51	40
Naves and spokes	5	145	100	1	8	.....	4	109	94
Whips	...	.....	.....	...	.....	.....	...	.....	.....
Total	10	193	130	31	240	151	154	1,068	921
CLASS 12.—SHIPBUILDING, &c.									
Docks and slips	4	1,848	1,848	...	.....	.....	3	396	271
Sailmaking	...	.....	.....	...	.....	.....	1	4	4
Ship and boat building	5	368	178	4	42	37	12	424	335
Total	9	2,216	2,026	4	42	37	16	824	610
CLASS 13.—FURNITURE, BEDDING, &c.									
Bedding and flock	2	66	46	6	40	33	25	417	374
Carpet-sewing	...	.....	.....	1	10	8	1	1	1
Iron bedsteads	...	.....	.....	...	.....	.....	3	201	150
Billiard-tables	...	.....	.....	1	11	11	3	69	41
Chair-making	...	.....	.....	1	7	7	6	43	32
Furniture—European	1	135	135	11	302	211	91	1,058	985
,, Chinese	...	.....	.....	...	.....	.....	19	172	138
,, Bamboo and Wicker	...	.....	.....	...	.....	.....	1	19	19
Picture frames	...	.....	.....	...	.....	.....	16	28	27
Window blinds	...	.....	.....	...	.....	.....	2	18	8
Total	3	201	181	20	370	270	167	2,026	1,775
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.									
Blue, baking-powder, soda, &c.	1	15	12	3	152	115	9	214	164
Chemical works and drugs	6	187	110	3	191	10	27	433	327
Fertilisers	4	74	53	...	.....	.....	4	133	104
Perfumes and essences	...	.....	.....	...	.....	.....	2	12	6
Paints and varnish	...	.....	.....	5	106	104	14	215	164
Total	11	276	175	11	449	229	56	1,007	765
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.									
Optical instruments	...	.....	.....	...	.....	.....	15	37	35
Surgical instruments	...	.....	.....	...	.....	.....	4	7	7
Other minor works	...	.....	.....	...	.....	.....	1	1	1
Total	...	.....	.....	...	.....	.....	20	45	43

METROPOLITAN DISTRICT—*continued.*

TABLE XX—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.									
Electro-plating	...	.....	.....	3	44	32	17	131	121
Jewellery	...	.....	.....	...	.....	.....	38	178	168
Total	...	.....	.....	3	44	32	55	309	289
CLASS 17.—LIGHT, HEAT, AND POWER.									
Electrical apparatus	...	.....	.....	...	.....	.....	29	157	140
Electric light	8	42,750	33,240	60	1,737	1,323	37	1,226	1,073
Gas	5	1,910	1,165	3	255	204	5	1,076	429
Lamps and gas mantles	...	.....	.....	...	.....	.....	4	54	41
Hydraulic power	1	700	500	...	.....	.....	1	5	3
Coke works	...	.....	.....	...	.....	.....	2	639	536
Total	14	45,360	34,905	63	1,992	1,527	78	3,157	2,222
CLASS 18.—LEATHERWARE (EXCEPTING SADDLERY AND HARNESS).									
Fancy leather	2	130	86	3	96	80	11	64	57
Leather belting	...	.....	.....	1	14	14	3	79	59
Portmanteaux and bags	...	.....	.....	1	4	3	11	71	53
Total	2	130	86	5	114	97	25	214	169
CLASS 19.—MINOR WARES (NOT ELSEWHERE INCLUDED).									
Baskets, &c.	...	.....	.....	...	.....	.....	1	2	2
Brooms and brushes	...	.....	.....	5	53	41	18	42	39
Florists and seedsmen	...	.....	.....	1	9	9	2	18	16
Laundries	20	301	250	26	189	139	92	735	651
Rubber goods	1	289	250	...	.....	.....	5	285	259
Toys	...	.....	.....	4	28	17	9	31	31
Painting and signwriting	...	.....	.....	...	.....	.....	2	3	2
Other minor works	...	.....	.....	...	.....	.....	10	56	52
Total	21	590	500	36	279	206	139	1,172	1,052

NOTE.—These figures include 2 steam plants using 45 h.-p., 55 gas plants using 928 h.-p., and 31 electric and oil plants using 404 h.-p., for ighting purposes at Picture Shows.

NEWCASTLE DISTRICT RETURNS.

TABLE XXI.

Classification of Persons Employed, 1907–16.

Year.	Number of Factories on Register.	Persons employed.								
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1907	495	249	284	435	441	3,337	726	4,021	1,451	5,472
1908	507	256	222	427	436	3,306	693	3,989	1,351	5,340
1909	498	205	100	377	310	3,125	656	3,707	1,066	4,773
1910	524	263	98	430	265	3,258	748	3,951	1,111	5,062
1911	569	274	117	446	278	3,570	782	4,290	1,177	5,467
1912	589	239	145	411	303	3,784	1,290	4,434	1,290	5,724
1913	572	234	163	415	280	3,988	903	4,637	1,346	5,983
1914	583	158	123	388	237	3,802	769	4,348	1,129	5,477
1915	579	193	140	385	278	4,559	767	5,137	1,185	6,322
1916	774	189	134	403	271	4,951	709	5,546	1,114	6,660

TABLE XXII.

Horse-power of Machinery used, 1907–16.

Year.	Steam.		Gas.		Electricity and other.		Total.	
	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	*No. of Factories.	Horse-pow
1907	143	3,184	33	372	16	1,200	192	4,756
1908	152	3,413	37	219	24	1,703	213	5,335
1909	156	3,458	42	224	33	1,717	231	5,399
1910	154	4,275	47	304	56	2,325	257	6,904
1911	167	4,424	59	377	90	2,489	316	7,290
1912	176	4,420	66	451	109	1,792	351	6,663
1913	166	4,553	66	474	119	1,824	351	6,851
1914	145	4,700	76	541	132	3,313	353	8,554
1915	150	5,957	69	1,477	131	1,654	350	9,088
1916	194	45,949	101	994	203	10,699	498	57,642

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using power.

NEWCASTLE DISTRICT—*continued.*

Table XXIII.

Classification of Factories according to Number of Persons employed, 1907–1916.

Year.	Number of Factories in which the number of persons employed is—														Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and over.	
7	165	213	70	19	13	6	1	3	3	...	...	...	...	2	495
8	169	224	64	22	9	11	2	...	3	1	...	1	1	...	507
9	219	179	51	23	10	8	1	1	4	...	...	2	...	...	498
0	228	191	60	17	9	8	4	...	3	2	...	2	...	...	524
1	252	197	66	27	5	12	2	2	3	1	...	2	...	...	569
2	270	203	53	29	13	12	1	1	1	3	1	2	...	...	589
3	234	217	61	20	16	10	7	1	...	3	2	...	1	...	572
4	290	172	57	26	13	12	5	3	...	3	2	...	...	...	583
5	305	156	62	18	12	12	5	1	3	1	2	...	1	1	579
6	473	182	60	21	15	8	4	2	5	2	...	...	...	2	774

Table XXIV.

Number of Persons Employed in each Class, 1916.

Class of Factory.	Number of Factories on Register.	Persons employed.									
		Under 16 years.		16 years and under 18 years.		18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
I. Treating raw materials, &c.	11	3	...	1	...	...	...	53	...	57	...	57
II. Oils and fats, animal and vegetable, &c.	5	17	3	5	8	6	9	135	7	163	27	190
III. Processes in stone, clay, and glass, &c.	35	2	...	15	1	16	...	217	1	250	2	252
IV. Working in wood	124	16	1	64	1	69	...	750	...	899	2	901
V. Metal works, machinery, &c.	61	56	...	145	...	151	...	1,760	...	2,112	...	2,112
VI. Connected with food and drink, &c.	282	45	22	88	39	90	34	699	47	922	142	1,064
VII. Clothing and textile fabrics, &c.	87	5	97	23	174	38	220	176	277	242	768	1,010
VIII. Books, paper, printing, &c.	33	17	6	25	19	24	17	175	30	241	72	313
IX. Musical instruments	...	...	...	...	...	...	...	...	...	...	...	...
X. Arms and explosives	1	...	...	...	...	...	...	1	...	1	...	1
XI. Vehicles and fittings, saddlery and harness	51	11	...	19	...	23	...	176	2	234	2	236
XII. Ship and boat building, &c.	5	1	...	...	...	4	...	38	...	43	...	43
XIII. Furniture, bedding, &c.	18	7	...	14	...	20	...	88	2	129	2	131
XIV. Drugs, chemicals, and by-products	1	...	...	...	...	1	...	1	...	2	...	2
XV. Surgical and other scientific instruments	1	...	...	...	...	1	...	1	...	2	...	2
XVI. Jewellery and plated-ware, &c.	4	4	...	4	...	2	...	12	...	22	...	22
XVII. Heat, light and power	42	3	...	3	...	8	...	185	...	199	...	199
XVIII. Leatherware, n.e.i.	...	...	...	...	...	...	...	...	...	...	...	...
XIX. Minor wares, n.e.i.	13	2	5	...	29	4	33	22	30	28	97	125
Total	774	189	134	406	271	462	313	4,489	396	5,546	1,114	6,660

Table XXV.

Horse-power of Machinery used in each Class, 1916.

Class of Factory.	Steam.		Gas.		Electricity.		Other.	
	No. of Factories.	Horse-power actually used.	No. of Factories.	Horse-power actually used.	No. of Factories.	Horse-power actually used.	No. of Factories.	Horse-power actually used.
I. Treating raw materials, product of pastoral pursuits	3	118	2	20	4	104	1	3
II. Oils and fats—animal, vegetable, &c.	3	119	...	.....	...	.....	...	.....
III. Processes in stone, clay, glass, &c.	21	460	2	16	4	134	2	2
IV. Working in wood	86	2,106	11	143	13	255	6	39
V. Metal works, machinery, &c.	9	40,673	11	95	18	6,311	5	37
VI. Connected with food and drink, &c.	44	1,008	34	195	37	391	29	86
VII. Clothing and textile fabrics, &c.	1	3	3	5	20	68	...	.....
VIII. Books, paper, printing and engraving, &c.	...	.....	12	131	11	99	6	15
IX. Musical instruments, &c.	...	.....	...	.....	...	.....	...	.....
X. Arms and explosives	1	10	...	.....	1	4	...	.....
XI. Vehicles and fittings, saddlery and harness, &c.	7	124	8	42	6	21	3	7
XII. Ship and boat building, &c.	4	70	...	.....	...	.....	1	10
XIII. Furniture, bedding, &c.	2	21	5	28	8	71	...	.....
XIV. Drugs, chemicals, and by-products	...	... ...	...	.....	1	52	...	.....
XV. Surgical and other scientific instruments	...	.....	...	.....	1	1	...	.....
XVI. Jewellery and plated-ware, &c.	...	.....	...	.....	2	7	...	... ...
XVII. Heat, light and power	10	1,201	12	318	9	2,865	11	99
XVIII. Leatherware, n.e.i.	...	.....	...	.....	...	.....	...	.....
XIX. Minor wares, n.e.i.	3	36	1	1	4	18	...	.....
Total	194	45,949	101	994	139	10,401	64	298

NEWCASTLE DISTRICT—*continued.*

Table XXVI.

Classification of Factories according to Number of Persons employed, 1916.

Class of Factory.	Number of Factories in which the number of persons employed is—													To.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and over.	
I. Treating raw material, product of pastoral pursuits	10	...	...	...	...	1	...	...	...	...	...	...	...	...	
II. Oils and fats—animal, vegetable, &c.	...	3	1	...	...	...	...	...	...	1	...	...	...	...	
III. Processes relating to stone, clay, glass, &c.	17	8	7	2	1	...	...	...	...	...	...	...	...	...	
IV. Working in wood	58	40	16	5	2	3	...	...	...	..	...	...	...	...	1
V. Metal work, machinery, &c.	30	16	7	2	...	...	...	1	2	1	...	...	...	2	
VI. Connected with food and drink, &c.	230	35	8	4	1	...	2	1	1	...	...	...	...	...	2
VII. Clothing and textile fabrics, &c.	39	28	9	1	3	3	2	...	2	...	...	...	...	...	
VIII. Books, paper, printing, engraving, &c.	12	13	1	3	3	1	..	...	...	..	...	...	..	...	
IX. Musical instruments, &c.	...	...	...	...	...	...	...	..	...	...	...	...	...	...	
X. Arms and explosives	1	...	...	...	...	...	...	...	...	..	...	...	...	...	
XI. Vehicles and fittings, saddlery, harness, &c.	26	19	6	...	...	...	...	...	...	...	...	...	..	..	
XII. Ship and boat building, &c.	...	4	1	...	...	...	...	...	...	...	...	...	...	...	
XIII. Furniture, bedding, &c.	9	5	2	1	1	...	...	...	...	...	...	...	...	...	
XIV. Drugs, chemicals, and by-products	1	...	...	...	...	...	...	...	...	...	...	..	...	...	
XV. Surgical and other scientific instruments	1	...	...	...	...	...	...	...	...	...	...	...	...	...	
XVI. Jewellery and plated-ware, &c.	1	3	...	...	...	...	...	...	...	...	...	...	...	...	
XVII. Heat, light and power	33	4	1	1	3	...	...	...	...	...	...	...	...	...	
XVIII. Leatherware (excepting saddlery and harness)	...	...	...	...	...	...	...	...	...	..	...	...	...	...	
XIX. Minor wares, n.e.i.	5	4	1	2	1	...	...	...	...	...	...	...	...	...	
Total	473	182	60	21	15	8	4	2	5	2	..	...	...	2	

Table XXVII.

Number of Persons employed in each Class, 1912-16.

Class of Factory.	1912.	1913.	1914.	1915.	1916
I. Treating raw material, product of pastoral pursuits	23	19	15	16	
II. Oils and fats—animal, vegetable, &c.	262	238	241	177	1
III. Processes relating to stone, clay, glass, &c.	341	441	337	321	2
IV. Working in wood	573	630	659	550	9
V. Metal works, machinery, &c.	1,310	1,361	1,204	2,185	2,1
VI. Connected with food and drink, &c.	1,070	1,074	926	963	1,0
VII. Clothing and textile fabrics, &c.	1,128	1,218	1,088	1,070	1,0
VIII. Books, paper, printing, engraving, &c.	209	227	273	251	3
IX. Musical instruments, &c.	.....	.....	.....	.....	...
X. Arms and explosives	6	4	7	11	
XI. Vehicles and fittings, saddlery, harness, &c.	270	258	230	239	2
XII. Ship and boat building, &c.	65	47	49	40	
XIII. Furniture, bedding, &c.	119	137	134	149	1
XIV. Drugs, chemicals, and by-products	48	32	5	9	
XV. Surgical and other scientific instruments	2	2	2	1	
XVI. Jewellery and plated-ware, &c.	17	17	19	17	
XVII. Heat, light and power	194	188	200	180	
XVIII. Leatherware (excepting saddlery and harness)	... ...	.....	.....	.....	...
XIX. Minor wares, n.e.i.	87	90	88	143	
Total	5,724	5,983	5,477	6,322	6,0

Table XXVIII.

Number of Persons employed in some of the most important Industries, 1912-16.

Class of Factory.	1912.	1913.	1914.	1915.	1916.	Class of Factory.	1912.	1913.	1914.	1915.
Soap and candles	175	178	161	175	174	Breweries	87	102	75	84
Bricks and tiles	194	291	210	205	127	Wine making	81	95	91	113
Pottery and earthenware	70	77	70	63	56	Tailoring	505	538	465	473
Joinery	214	227	207	219	195	Dressmaking, Makers' materials	296	278	259	252
Sawmills, timber	272	336	332	279	613	,, Customers' ,,	94	127	69	46
Engineering and bolts and nuts	662	737	661	747	475	Printing, bookbinding, &c.	185	197	221	222
Ironworks and foundries	66	59	50	762	945	Coaches and waggons	127	121	106	114
Smelting	396	421	311	512	556	Saddlery and harness	65	59	59	52
Biscuits	338	273	94	114	109	Ship and boat building	65	35	37	27
Bread and pastry	247	274	272	284	363	Furniture—European	96	110	112	116
Confectionery	46	47	48	42	43	Gasworks	88	87	96	92
Oil refining	87	60	80	2	16	Clothing—Men's slops	151	203	207	230
Aerated waters	106	103	96	121	92	Shirts	38	35	30	32

BROKEN HILL DISTRICT RETURNS.

Table XXIX.

Classification of Persons Employed, 1916.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females	Total.
I. Treating raw materials, product of pastoral pursuits	2	...	.....	...	.....	...	1	5	...	5	1	6
I. Oils and fats—animal, vegetable, &c.	1	...	.....	..	.....	...	.....	2	...	2	...	2
I. Processes in stone, clay, glass, &c.	3	...	.....	...	.....	1	.....	10	...	11	...	11
V. Working in wood	20	3	.....	7	.....	5	.....	50	...	65	...	65
V. Metal works, machinery, &c.	10	2	.. ...	16	.....	10	.....	83	...	111	...	111
I. Connected with food and drink, &c.	62	18	.....	17	.....	10	1	136	2	181	3	184
II. Clothing and textile fabrics, &c.	23	2	8	2	25	2	26	21	69	27	128	155
II. Books, paper, printing and engraving, &c.	7	9	.....	5	2	6	4	29	3	49	9	58
II. Vehicles and fittings, saddlery and harness, &c.	10	5	.....	6	.....	6	.....	22	...	39	...	39
II. Furniture, bedding, &c.	2	...	... ..	...	.....	...	.....	2	...	2	...	2
I. Heat, light and power	3	...	.....	2	.....	...	.....	22	...	24	...	24
X. Minor wares, n.e.i.	7	...	.....	1	.....	...	.....	12	5	13	5	18
Total	150	39	8	56	27	40	32	394	79	529	146	675

Table XXX.

Horse-power of Machinery used, 1916.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
II. Processes in stone, clay, glass, &c.	...	.....	.....	...	.....	.....	1	20	12
V. Working in wood	1	160	160	2	11	9	15	108	83
V. Metal works, machinery, &c.	1	90	60	1	14	14	7	46	42
I. Connected with food and drink, &c.	3	74	48	27	333	271	26	149	125
II. Clothing and textile fabrics, &c.	...	.....	.....	...	.....	.....	1	1	1
II. Books, paper, printing, engraving, &c.	2	20	17	2	14	2	4	15	12
II. Vehicles and fittings, saddlery and harness, &c.	...	.....	.....	3	12	12	3	15	11
II. Heat, light and power	2	377	364	1	8	6	2	33	22
X. Minor wares, n.e.i.	1	8	4	...	.....	.....	1	10	5
Total	10	729	653	36	392	314	60	397	313

Table XXXI.

Classification of Factories according to Number of Persons employed, 1916.

Class of Factory.	Number of Factories in which the number of persons employed is—														Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and over.	
I. Treating raw material, product of pastoral pursuits	1	1	...	...	...	...	...	...	...	...	...	...	...	...	2
I. Oils and fats—animal, vegetable, &c.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
I. Processes relating to stone, clay, glass, &c.	1	2	...	...	...	...	...	...	...	..	...	...	...	...	3
V. Working in wood	15	4	1	...	...	...	...	...	...	...	...	...	...	...	20
V. Metal works, machinery, &c.	6	1	2	...	...	...	1	...	...	...	...	...	...	...	10
I. Connected with food and drink, &c.	45	14	2	1	...	...	...	...	...	...	...	...	...	...	62
II. Clothing and textile fabrics, &c.	4	14	4	1	...	...	...	...	...	...	...	...	...	..	23
II. Books, paper, printing, engraving, &c.	1	4	1	1	...	...	...	...	...	...	...	...	...	...	7
II. Vehicles and fittings, saddlery, harness, &c.	5	5	...	...	...	...	...	...	...	...	...	...	...	...	10
II. Furniture, bedding, &c.	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2
II. Heat, light and power	1	...	2	...	...	...	...	..	...	...	...	...	...	...	3
X. Minor wares, n.e.i.	5	2	...	..	...	...	...	...	...	...	...	...	...	...	7
Total	87	47	12	3	...	...	1	...	...	...	...	...	...	...	150

REST OF STATE RETURNS.

Table XXXII.

Classification of Persons employed, 1916.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
I. Treating raw materials, product of pastoral pursuits...	63	1	...	10	...	14	...	240	...	26?	...	26
II. Oils and fats—animal, vegetable, &c.	12	...	..	2	...	1	...	12	...	15	...	1
III. Processes in stone, clay, glass, &c.	90	18	...	44	...	45	...	1,342	...	1,449	...	1,44
IV. Working in wood	272	16	...	69	...	109	...	1,198	..	1,392	...	1,39
V. Metal works, machinery, &c.	121	31	...	94	...	79	...	1,309	...	1,513	...	1,51
VI. Connected with food and drink, &c.	897	55	1	140	5	167	1	2,300	15	2,662	22	2,68
VII. Clothing and textile fabrics, &c	230	21	56	54	114	56	177	431	372	562	719	1,28
VIII. Books, paper, printing and engraving, &c.	152	32	2	60	...	60	...	477	11	629	13	6
XI. Vehicles and fittings, saddlery harness, &c.	310	53	...	129	...	140	...	876	...	1,198	...	1,1
XIII. Furniture, bedding, &c.	18	3	...	3	...	8	...	50	2	64	2	(
XIV. Drugs, chemicals, &c.....	1	...	...	...	...	...	...	2	1	2	1	
XVI. Jewellery and Plated-ware, &c.	2	1	...	2	...	2	...	6	...	11	...	
XVII. Heat, light and power	140	15	...	18	...	27	...	597	...	657	...	6
XIX. Minor wares, n.e.i. (laundries)	19	...	...	...	15	2	23	21	53	23	91	1
Total.....	2,327	246	59	625	134	710	201	8,861	454	10,442	848	11,2

Table XXXIII.

Horse-power of Machinery used, 1916.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actua use
I. Treating raw materials, product of pastoral pursuits	38	484	367	11	194	115	9	79	
II. Oils and Fats—animal, vegetable, &c.....	5	57	39	...	...	...	...	...	...
III. Processes in stone, clay, glass, &c.....	32	6,617	5,675	3	172	167	25	2,583	1,7
IV. Working in wood.....	159	4,307	3,360	39	623	448	38	382	3
V. Metal works, machinery, &c.....	21	8,268	8,170	27	286	274	29	758	7
VI. Connected with food and drink, &c.	158	8,151	6,339	129	2,674	2,016	194	1,124	8
VII. Clothing and textile fabrics, &c.....	2	140	118	10	97	90	14	73	
VIII. Books, paper, printing, engraving, &c.....	...	...	...	59	286	195	85	262	2
XI. Vehicles and fittings, saddlery and harness, &c.	13	154	83	51	420	300	105	547	4
XIII. Furniture, bedding, &c..	1	6	6	5	46	39	8	67	
XVI. Jewellery and Plated-ware, &c.....	...	...	...	...	...	...	1	5	
XVII. Heat, light and power.....	31	3,421	2,655	41	1,834	1,509	64	1,717	1,2
XIX. Minor wares, n.e.i.....	7	57	37	5	43	39	3	18	
Total..... ...	467	31,662	26,849	380	6,675	5,152	575	7,615	5,6

Table XXXIV.

Classification of Factories according to Number of Persons employed, 1916.

Class of Factory.	Number of Factories in which the number of persons employed is—													T
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and over.	
I. Treating raw materials, product of pastoral pursuits..	40	13	9	1	...	...	...	...	...	...	..	...	...	...	
II. Oils and fats—animal, vegetable, &c.	12	...	...	...	...	...	...	...	...	...	...	...	...	...	
III. Processes relating to stone, clay, glass, &c.	45	23	8	6	2	3	1	...	...	1	..	...	1	...	
IV. Working in wood.....	155	73	35	7	1	1	...	...	...	..	...	..	...	...	
V. Metal works, machinery, &c.	71	36	9	2	...	...	...	...	...	...	1	1	1	...	
VI. Connected with food and drink, &c.	763	102	22	6	...	...	...	1	3	...	...	...	...	...	
VII. Clothing and textile fabrics, &c	100	105	17	3	2	1	2	...	...	...	..	..	...	...	
VIII. Books, paper, printing, engraving, &c.	87	53	10	2	...	...	...	...	...	...	...	...	...	...	
XI. Vehicles and fittings, saddlery, harness, &c.....	176	114	19	1	...	...	...	...	...	...	...	...	...	...	
XIII. Furniture, bedding, &c.....	8	10	...	...	...	...	...	...	..	...	...	...	...	...	
XIV. Drugs, chemicals, &c.....	1	...	...	...	...	...	...	...	..	...	...	...	...	...	
XVI. Jewellery and Plated-ware, &c.	..	2	...	...	...	...	...	...	...	...	...	...	...	...	
XVII. Heat, light and power	103	24	3	6	...	3	1	...	...	...	...	...	...	...	
XIX. Minor wares, n.e.i. (laundries).....	8	7	3	1	...	...	...	...	...	..	...	...	...	...	
Total	1569	562	135	35	5	8	4	1	3	1	1	1	2	...	3

FACTORIES AND SHOPS ACT, 1912.

Prosecutions during 1916.

Date.	Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £	Penalty. s.	Penalty. d.	Costs. £	Costs. s.	Costs. d.
				METROPOLITAN DISTRICT.									
5/1/16	Sydney.....	Woodhill, A. A.	Hutchison-street, Sydney.	Cabinetmaking	34	Failing to fence dangerous machinery.	NG	2	0	0	0	6	0
3/1/16	Paddington...	Jacobson, J. P.	234 Jersey-road, Paddington.	Laundry	43	Failing to notify overtime.	G	0	2	6	0	6	0
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Failing to record overtime.	...	Withdrawn.					
2/1/16	Sydney.....	Boulton, G. W.	210 George-street, Sydney.	Printing	7	Being in occupation of an unregistered factory.	G	2	0	0	0	6	0
3/1/16	,, ...	Connell & Co., Ltd.	355 Kent-street, Sydney.	Tea packing.....	43	Failing to notify overtime.	G	0	10	0	0	6	0
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Employing female over 30 times overtime.	G	0	10	0	0	7	0
,,	,, ...	Cohen & Sons, Ltd,	433 Kent-street, Sydney.	Clothing	43	Failing to record overtime.	G	1	0	0	0	9	0
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Failing to notify overtime.	G	1	0	0	0	6	0
4/1/16	,, ...	Sayers, Allport, Ltd.	53 Macquarie-st., Sydney.	Chemists' Sundries.	43	Employing female over 3 hours overtime.	G	0	10	0	0	6	0
7/1/16	Newtown.....	Solomon, Harris	Brown-street, Camperdown.	Milling	33	Failing to fence mill gearing.	G	2	0	0	0	6	0
,,	,, ...	Wade, David ...	Church-street, Camperdown.	,, ...	33	,, ,, ...	G	5	0	0	0	6	0
,,	Liverpool.....	Hirst, Albert ...	Park-road, Cabramatta.	Sawmilling	38	Failing to report accident.	G	1	0	0	0	6	0
4/2/16	Sydney ...	Bowman, Mary	44 Campbell-st., Sydney.	Knitting	45	Employing girl under 16 years without a Certificate of Fitness.	...	Withdrawn.					
,,	,, ...	Poullar's, Ltd....	102-4 Albion-st., Sydney.	Dyers	43	Failing to notify overtime.	G	1	0	0	0	8	0
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Employing girl over 3 hours overtime.	...	Withdrawn.					
,,	,, ...	Ford, Sherington, Ltd.	Kippax-street, Surry Hills.	Leather goods...	Reg. 16	Failing to provide wash basins.	NG	Dismissed.					
,,	,, ...	,, ,, ...	,, ,, ...	,, ,, ...	43	Failing to notify overtime.	...	Withdrawn.					
,,	,, ...	Mark Foy's, Ltd.	Elizabeth-street, Sydney.	Tailoring	14	Failing to exhibit time sheet.	G	0	10	0	0	6	0
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	Reg. 17	Failing to provide drinking water.	...	Withdrawn.					
5/2/16	Newtown.....	Dawson Bros, Ltd.	Fitzroy-street, Newtown.	Straw hats	43	Failing to notify overtime.	G	1	0	0	0	7	0
,,	,, ...	,, ,, ...	,, ,, ...	,, ,, ...	43	Failing to record overtime.	...	Withdrawn.					
,,	,, ...	Nossiter, T. B.	Alice-street, Newtown.	Jam	43	Failing to notify overtime.	G	1	0	0	0	8	0
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Failing to record overtime.	...	Withdrawn.					
9/2/16	Redfern	Conlon, John ...	29 Castlereagh-st., Redfern.	Bakery	38	Failing to report accident.	G	2	0	0	0	6	0
2/3/16	Sydney.....	Golding, H. S....	Wentworth-av., Sydney.	Shirts	43	Failing to notify overtime.	G	0	10	0	0	6	0
,,	,, ...	Anderson & Co. Ltd.	Nicholls-street, Sydney.	Hats	43	,, ,,	G	0	10	0	0	6	0
,,	,, ...	,, ,,	,, ,,	,, ...	20	Failing to keep factory in a cleanly state.	...	Withdrawn.					
,,	,, ...	S. Walder, Ltd.	340 Pitt-street, Sydney.	Tents.....	56	Failing to comply with order.	G	0	10	0	0	6	0
3/3/16	Paddington...	Louis, Peter ...	39 Oxford-street, Paddington.	Laundry	Reg. 15	Failing to screen w.c.	G	2	0	0	0	8	0
0/3/16	,, ...	Warleigh, Arthur.	Wentworth-street, Paddington.	,, ...	43	Failing to record overtime.	G	0	10	0	0	8	0
0/3/16	Newtown.....	Decent, James...	47 Alice-street, Newtown.	Hats	14	Failing to exhibit copy of Act.	G	1	10	0	0	6	0
,,	,, ...	Abel & Co., Ltd.	King-street, Newtown.	Pastry	33	Failing to fence mill gearing.	G	0	10	0	0	6	0
,,	,, ...	Webber, Alfred	Whatley-street, Newtown.	Wheelwrighting	38	Failing to report accident.	G	1	10	0	0	7	
,,	,, ...	,, ,,	,, ,,	,, ...	Reg. 15	Failing to light and ventilate w.c.	G	1	10	0	0	6	0
0/3/16	Sydney.....	Madeley, Thomas.	295 Sussex-street, Sydney.	Furniture.....	33	Failing to maintain fencing.	NG	1	0	0	0	7	0
2/3/16	Balmain	Bourne, W. H.	Bridge-road, Drummoyne.	Coachbuilding...	33	,, ,,	G	1	0	0	0	6	0
3/3/16	Sydney.....	Gregory, A.....	40 Market-street, Sydney.	Saddlery	7	Being in occupation of an unregistered factory.	G	1	0	0	0	6	0
8/3/16	Redfern	Waltou, J. T. ...	11 Botany-street, Waterloo.	Laundry ...	38	Failing to report an accident.	G	2	0	0	0	7	0
,,	,, ...	,, ,, ...	,, ,,	,, ...	43	Failing to record overtime.	G	1	0	0	0	6	0
1/4/16	,, ...	Nirvana Soap Co., Ltd.	Renwick-street, Redfern.	Soap	7	Being in occupation of an unregistered factory.	G	1	0	0	0	6	0

FACTORIES AND SHOPS ACT, 1912—Prosecutions—*continued.*

Date.	Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £	s.	d.	Costs. £	s.
				METROPOLITAN—*continued.*								
13/4/16	Sydney.....	Adams, Frank...	178 Castlereagh-street, Sydney.	Printer	33	Failing to fence mill-gearing.	G	1	0	0	0	6
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	40	Employing child under 14 years without special permission.	G	0	10	0	0	6
,,	,, ...	Sandeman, Ltd.	179 Castlereagh-street, Sydney.	Bottling	43	Employing female over 3 hours overtime.	G	1	0	0	0	6
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Failing to record overtime.	G	0	10	0	0	6
,,	Paddington...	Latter, R.	Boundary-street, Paddington.	Sawmill	33	Failing to maintain fencing.	G	3	0	0	0	6
,,	Sydney.....	Lyons, Barnett	Liverpool-street, Sydney.	Clothing	45	Employing girl under 16 years without a certificate of fitness.	N G	0	10	0	0	6
,,	,, ...	Cohen, C. H. ...	409 Kent-street, Sydney.	,, ...	20	Failing to keep factory in a cleanly state.	G	2	0	0	0	6
,,	,, ...	Samuels, M. ...	Liverpool-street, Sydney.	,, ...	45	Employing girl under 16 years without a certificate of fitness.	G	1	0	0	0	6
,,	,, ...	Weingott, S. & Sons, Ltd.	174a Sussex-street, Sydney.	,, ...	43	Employing female over 3 hours overtime.	G	1	0	0	0	7
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	,, ,,	G	1	0	0	0	7
14/4/16	Newtown.....	Australian Woollen Mills, Ltd.	Sydenham-road, Marrickville.	Woollen mill ..	38	Failing to report accident.	G	0	15	0	0	9
,,	Glebe	Law, S. A.	128 George-street, Camperdown.	Boots.....	33	Failing to fence mill-gearing.	G	1	0	0	0	6
17/4/16	Sydney.....	Budge, James ...	209–15 Harris-st., Pyrmont.	Engineering	33	Failing to fence fly-wheel.	N G	2	0	0	0	7
26/4/16	,, ...	Jonas, S.	80½ Bathurst-st., Sydney.	*.....	33	Failing to fence mill-gearing.	G	1	10	0	0	6
27/4/16	,, ...	Weingott, S. & Sons, Ltd.	174a Sussex-street, Sydney.	Clothing	20	Failing to keep factory in a cleanly state.	Ex. parte	10	0	0	0	6
4/5/16	,, ...	Lees, H. W. ...	Buckingham-st., Sydney.	Paper boxes.....	38	Failing to report an accident.	G	1	0	0	0	7
5/5/16	Newtown.....	Ogden, W.	13 Erskineville-rd. Newtown.	Joinery	38	,, ,,	G	0	10	0	0	9
10/5/16	Sydney.....	Kiely, E.	250 Pitt-street, Sydney.	Bookbinder	43	Employing female over 3 hours overtime.	G	2	0	0	0	7
11/5/16	North Sydney	Summers, A. ...	Mount-st., North Sydney.	Tailor	Reg. 15	Failing to provide w.c.	N G	0	2	6	0	9
18/5/16	Sydney.....	Skirts Ltd.	8 Oxford-street, Sydney.	Costumes	43	Failing to notify overtime.	G	0	15	0	0	6
,,	,, ...	,, ...	,, ,, ..	,, ...	43	Failing to record overtime.	G	0	15	0	0	7
,,	,, ...	MacMahon, J. T.	218½ Sussex-street, Sydney.	Tarpaulins	20	Failing to keep factory in a cleanly state.	N G	Dismissed.				
,,	,, ...	Gow, Robert ...	377 Sussex-street, Sydney.	Printer	43	Employing person overtime more than 30 times.	G	1	0	0	0	7
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Failing to record overtime.	G	1	0	0	0	7
19/5/16	Glebe	Moffatt, G. D....	134 Parramatta-road, Camperdown.	Engineering.....	33	Failing to fence mill-gearing.	G	5	0	0	0	6
,,	Ashfield	Edwards' Laundry, Ltd.	276 Liverpool-rd., Ashfield.	Laundry	43	Failing to notify overtime.	G	0	10	0	0	10
,,	,, ...	,, ,,	,, ,,	,, ...	43	Employing female over 3 hours overtime.	G	0	14	0		6
25/5/16	Sydney..	Blackwood, L....	159 Harris-street, Sydney.	*	56	Failing to comply with an order.	G	0	10	0	0	6
,,	,, ...	Amor, W.	Mountain-street, Sydney.	Die-sinker	43	Failing to notify overtime.	G	1	0	0	0	6
29/5/16	,, ...	Smith, H. A. ...	Queen Victoria Markets, Sydney.	Photos	20	Failing to keep factory in a cleanly state.	N G	Dismissed.				
7/6/16	Balmain	Bell & Frazer, Ltd.	Terry-st., Balmain.	Sawmill	33	Failing to fence mill-gearing.	G	10	0	0	0	6
8/6/16	Sydney.....	Gunn, Thomas...	Sydney Arcade, Sydney.	Tailoring	43	Employing female over 3 hours overtime.	G	0	10	0	0	7
,,	,, ...	Nicholl, A. B....	Castlereagh-street, Sydney.	,, ...	43	Failing to notify overtime.	G	0	10	0	0	6
13/6/16	Redfern	Vernon Shoe Co., Ltd.	Mitchell-road, Alexandria.	Boots.....	43	Employing female over 3 hours overtime.	G	1	0	0	0	6
15/6/16	Sydney.....	Harvey, Oscar...	232 Clarence-st., Sydney.	Engineering.....	7	Being in occupation of an unregistered factory.	G	1	0	0	0	6
,,	,, ...	House, J. W. ...	360–2 Kent-street, Sydney.	Umbrellas	43	Employing female over 3 hours overtime.	G	0	13	0	0	7
,,	,, ...	New, Thomas ..	Wentworth-place, Sydney.	Engineering.....	33	Failing to fence mill-gearing.	G	5	0	0	0	6
,,	,, ...	,, ,, ...	,, ,,	,, ...	7	Being in occupation of an unregistered factory.	G	3	0	0	0	6
,,	,, ...	Hooker, George.	188–90 Sussex-st., Sydney.	Tents.....	45	Employing girl under 16 years without a certificate of fitness.	G	1	0	0	0	6
,,	,, ...	,, ,,	,, ,,	,, ...	Reg. 19	Keeping door locked leading to fire-escape.	G	5	0	0	0	6

* Sued Owner.

FACTORIES AND SHOPS ACT, 1912—*continued.*

Date.	Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £	Penalty. s.	Penalty. d.	Costs. £	Costs. s.	Costs. d.
				METROPOLITAN—*continued.*									
15/6/16	Sydney.....	Marchant & Co., Ltd.	435-7 Kent-street, Sydney.	Printing	20	Failing to keep factory in a cleanly state.	G	5	0	0	0	6	0
,,	,, ...	,, ,,	,, ,,	,, ...	45	Employing boy under 16 years without a certificate of fitness.	G	1	0	0	0	7	0
21/6/16	Newtown.....	Grundy, Joseph.	Leslie-street, Marrickville.	Boots.....	40	Employing child under 14 years without special permission.	G	1	0	0	0	8	0
20/7/16	Sydney.....	Prentice, James.	City-road, Sydney.	Printing	33	Failing to fence dangerous machinery.	G	3	0	0	0	6	0
,,	,, ...	Merchants&Traders Assn., Ltd.	40 Market-street, Sydney.	,, ...	43	Failing to notify overtime.	G	1	0	0	0	6	0
,,	,, ...	,, ,,	,, ,,	,, ...	45	Employing child under 16 years without a certificate of fitness.	G	1	0	0	0	7	0
,,	,, ...	Murdock,Sidney	533 George-street, Sydney.	Clothing	Reg. 15	Failing to provide proper w.c. accommodation.	G	2	0	0	0	6	0
,,	,, ...	,, ,,	,, ,,	,, ...	Reg. 16	Failing to provide proper lavatory accommodation.	G	2	0	0	0	6	0
24/7/16	,, ...	Gordon, Morris	85 Clarence-street, Sydney	,, ...	45	Employing child under 16 years without a certificate of fitness.	G	1	0	0	0	7	0
26/7/16	Balmain	Dodds, Harold	Western-road, Rozelle	Pastry	43	Failing to notify overtime.	G	1	0	0	0	6	0
,,	,, ...	,, ,,	,, ,,	,, ...	43	Employing female over 3 hours overtime.	G	1	0	0	0	7	0
27/7/16	Sydney.....	Martin, Alex. ...	21-3 Wellington-st., Sydney	*.....	56	Failing to comply with order.	G	Order made.					
2/8/16	Newtown.....	Zuttion, Peter...	693 King-street, St. Peters.	Biscuits	43	Failing to record overtime.	G	1	0	0	0	6	0
,,	,, ...	,, ,,	,, ,,	,, ...	43	Employing female over 3 hours overtime.	G	1	0	0	0	6	0
9/8/16	Parramatta ...	Goodlet & Smith, Ltd.	Merrylands	Tiles	44	Employing girl under 18 years in restricted part of factory.	G	1	0	0	0	7	0
16/8/16	Newtown.....	May, Harry.....	Harnett-avenue, Marrickville	Condiments	43	Employing female over 3 hours overtime.	G	1	0	0	0	7	0
,,	,, ...	,, ,,	,, ,,	,, ...	43	Failing to record overtime.	G	2	0	0	0	7	0
,,	Kogarah	Kruger, Alice ...	Bay-st., Rockdale	Shirts	33	Failing to fence millgearing.	G	3	0	0	0	6	0
,,	,, ...	Rate, Mary.....	Short-st., Carlton	Shoes	43	Failing to record overtime.	G	1	0	0	0	7	0
7/8/16	Sydney.....	Sutton Electroplate Co., Ltd.	Shepherd-street, Sydney	Electroplating...	20	Failing to keep factory in a cleanly state.	NG	1	0	0	0	6	0
,,	,, ...	McPhillamy, J. H.	Harris-st., Sydney	Confectionery ...	38	Failing to report an accident.	NG	Dismissed.					
,,	,, ...	Marcy, F. L. ...	356 Harris-street, Sydney.	Chemicals.....	Reg. 16	Failing to provide proper lavatory accommodation.	NG	2	0	0	0	6	0
,,	,, ...	Williams, J. E.	533 George-street, Sydney.	Clothing	14	Failing to exhibit time-sheet.	NG	0	10	0	0	6	0
,,	,, ...	,, ,,	,, ,,	,, ...	45	Failing to produce certificate of fitness.	NG	0	10	0	0	6	0
,,	,, ...	Saxton & Binns, Ltd.	Abattoir-road, Pyrmont.	Sawmill	38	Failing to report an accident.	G	2	0	0	0	7	0
,,	,, ...	Smith, H. A. ...	Queen Victoria Markets, Sydney.	Photos	43	Employing female over 3 hours overtime.	G	0	10	0	0	6	0
,,	,, ...	,, ,,	,, ,,	,, ...	43	Failing to notify overtime.	G	0	10	0	0	6	0
,,	,, ...	,, ,,	,, ,,	,, ...	68	Failing to pay tea-money.	G	0	10	0	0	6	0
,,	,, ...	Light & Farmer, Ltd.	140 Sussex-street, Sydney.	Electroplating..	20	Failing to keep factory in a cleanly state.	G	2	0	0	0	6	0
,,	,, ...	Rudd, C. L. ...	193 Queen Victoria Markets, Sydney.	Ties	20	,, ,,	G	1	0	0	0	6	0
,,	,, ...	Samuel Myer ...	133 Queen Victoria Markets, Sydney.	Tailoring	43	Failing to notify overtime.	G	1	0	0	0	6	0
,,	,, ...	,, ,,	,, ,,	,, ...	45	Employing a girl under 16 years without a certificate of fitness.	G	0	10	0	0	6	0
8/8/16	Glebe	Hughes, Richard	St. John's road, Glebe.	Canister	38	Failing to report accident.	G	2	10	0	0	6	0
4/8/16	Sydney.....	Biddell Bros., Ltd.	Lackey-st.,Sydney	Confectionery ...	38	,, ,,	G	2	0	0	0	9	0
,,	,, ...	,, ,,	,, ,,	,, ...	45	Employing boy under 16 years without a certificate of fitness.	G	1	0	0	0	7	0
,,	,, ...	Parsons, Chas...	88 Liverpool-st., Sydney.	Clothing	43	Failing to notify overtime.	G	1	0	0	0	6	0
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Employing female over 3 hours overtime.	G	1	0	0	0	6	0
5/8/16	,, ...	Phillip, G. B. ..	Margaret-street, Sydney.	Printing	14	Failing to exhibit time-sheet.	G	1	0	0	0	6	0
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Failing to record overtime.	G	1	0	0	0	6	0

* Sued as Owner.

FACTORIES AND SHOPS ACT, 1912—*continued.*

Date.	Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £	Penalty. s.	Penalty. d.	Costs. £	Costs. s.	Costs. d.
				METROPOLITAN—*continued.*									
4/9/16	Newtown.....	Mills, Vernon ...	St. Paul's-road, Camperdown.	Joinery	33	Failing to fence dangerous machinery.	G	5	0	0	0	6	0
,,	Sydney.....	Fielding & Co., Ltd.	Buckingham-st., Sydney.	Printing	45	Employing boy under 16 years without a certificate of fitness.	G	1	0	0	0	7	0
7/9/16	,, ...	Lee, E. & Co., Ltd.	14 Carrington-st., Sydney.	,, ...	45	Employing girl under 16 years without a certificate of fitness.	G	1	0	0	0	6	0
,,	,, ...	Riley, Sidney ...	251A Pitt-street, Sydney.	Photos	43	Failing to notify overtime.	G	1	0	0	0	6	0
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	7	Being in occupation of an unregistered factory.	G	2	0	0	0	6	0
12/9/16	Glebe	Abrams Brooms & Brushes, Ltd.	John-st., Glebe ...	Brooms.....	43	Failing to record overtime.	G	1	0	0	0	6	0
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Failing to pay for overtime.	G	0	10	0	0	6	0
18/9/16	Sydney.....	Bardsley, F. ...	Cunningham-lane, Sydney.	Printing	38	Failing to report accident.	G	2	0	0	0	6	0
,,	Newtown.....	Lambert, A. ...	386 Stanmore-rd., Marrickville.	Laundry	33	Failing to fence millgearing.	G	2	0	0	0	7	0
21/9/16	Sydney.....	Lasker, A.	402 George-street, Sydney.	Tailoring	20	Failing to keep factory in a cleanly state.	G	2	0	0	0	6	0
,,	,, ...	Keys, Douglas...	22 Abercrombie-street, Sydney.	Confectionery ...	Reg. 15	Failing to provide proper w.c. accommodation.	G	1	0	0	0	6	0
26/9/16	Glebe	Robertson, James.	Nelson-street, Annandale.	Canister	33	Failing to fence dangerous machinery.	G	2	0	0	0	6	0
29/9/16	,, ...	Waugh, G. E. ..	48 Glebe-road, Glebe.	Laundry	42	Employing female over 5 hours without an interval.	G	0	10	0	0	6	0
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Failing to notify overtime.	G	0	10	0	0	6	0
5/10/16	Sydney.....	Miller, F. H. ...	225 Clarence-st., Sydney.	Electroplating ..	20	Failing to keep factory in cleanly state.	G	3	0	0	0	6	0
6/10/16	,, ...	Goodman, Frank	49 Clarence-street, Sydney.	Jewellery.....	33	Failing to fence millgearing.	N G	Dismissed.					
18/10/16	,, ...	Cumberland Paper Board Mills, Ltd.	Upper Lane Cove.	Paper	45	Employing lad under 16 years without a certificate of fitness.	G	0	5	0	0	6	0
,,	,, ...	Mulroy, P. J. ...	Carlotta-st., North Sydney.	*	58	Permitting son to be employed contrary to Act.	G	0	7	6	0	6	0
8/11/16	,, ...	Harper, R. and Co., Ltd.	Duncan-street, Sydney.	Condiments	33	Failing to fence millgearing.	G	3	0	0	0	6	
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Failing to notify overtime.	G	2	0	0	0	8	
,,	,, ...	Washington H. Soul (Pattinson and Co., Ltd.).	492 Kent-street, Sydney.	Drugs	43	Employing female over 3 hours overtime.	G	1	0	0	0	7	
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	Reg. 16	Failing to provide sufficient lavatory accommodation.	G	1	0	0	0	6	
,,	,, ...	Farmer, Ethel...	68 Royal Arcade, Sydney.	Tailoring	42	Employing female over 5 hours without an interval.	G	2	0	0	0	7	
,,	,, ...	,, ,, ..	,, ...	,, ..	43	Failing to notify overtime.	G	2	10	0	0	6	
,,	,, ...	Ferguson, C. F.	47 Market street, Sydney.	,, ...	20	Failing to keep factory in a cleanly state.	G	5	0	0	0	6	
,,	,, ...	,, ...	,, ..	,, ...	43	Failing to record overtime.	G	2	0	0	0	7	
,,	,, ...	Hillier, Ernest	162 Pitt-street, Sydney.	Confectionery ...	Reg. 15	Failing to provide separate w.c. accommodation	N G	Dismissed.					
9/11/16	Redfern	Suey Yuen	Botany-rd, Alexandria.	Cabinetmaking.	49	Permitting work after hours in furniture factory.	G	0	5	0	0	6	
,,	,, ...	Yup Puck	(Employee of above).	,, ...	49	Working after hours in furniture factory.	G	0	2	6	0	6	
10/11/16	Newtown.....	Aerated Bread Co., Ltd.	University-street, Camperdown.	Pastry	43	Failing to notify overtime.	G	0	10	0	0	8	
,,	,, ...	,,	,, ...	,, ...	68	Failing to pay teamoney.	G	0	10	0	0	6	
14/11/16	Redfern	Gee Yuen Sing	Retreat-st., Alexandria.	Furniture	49	Working after hours in furniture factory.	G	0	10	0	0	6	
,,	,, ...	Jack Foo	244 Botany-road, Alexandria.	,, ...	49	,, ,,	G	0	10	0	0	6	
,,	Burwood	Dinnell, William	Cabarita	Asbestos	11	Obstructing an inspector.	N G	5	0	0	0	6	
,,	,, ...	,, ,,	,, ...	,, ...	7	Being in occupation of an unregistered factory.	G	1	0	0	0	6	
15/11/16	Balmain	Drake, David ...	Bald Rock, Balmain.	Shipbuilding ...	34	Failing to maintain fencing.	G	3	0	0	0	6	

* Sued as Parent.

FACTORIES AND SHOPS ACT, 1912—*continued.*

Date.	Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £	Penalty. s.	Penalty. d.	Costs. £	Costs. s.	Costs. d.
				METROPOLITAN—*continued.*									
11/16	Balmain	Bell & Fraser, Ltd.	Terry-st., Balmain	Sawmill	41	Employing lad under 16 years on prohibited machine.	G	10	0	0	0	7	0
,,	,, ...	,, ,,	,, ...	,, ...	Reg. 16	Failing to provide sufficient lavatory accommodation.	G	2	0	0	0	6	0
,,	Kogarah	Jolley, B.....	Forest-rd., Hurstville.	Tailoring	14	Failing to exhibit copy of Act.	G	0	10	0	0	6	0
,,	,, ...	,, ...	,, ...	,, ...	43	Failing to notify overtime.	G	0	10	0	0	7	0
11/16	Sydney.....	Stewart, W. J.	398 Sussex-street, Sydney.	Tea packing ...	Reg. 16	Failing to provide sufficient lavatory accommodation.	G	1	0	0	0	6	0
,,	,, ...	Parsons, Chas....	Liverpool-street, Sydney.	Clothing	45	Employing boy under 16 years without a certificate of fitness.	G	1	0	0	0	7	0
11/16	Glebe	Hudson's Eumenthol Chemical Co., Ltd.	31 Bay-st., Glebe.	Chemicals	14	Failing to exhibit a copy of the Act.	G	0	10	0	0	6	0
11/16	Redfern	Gold, Charles ...	Woodburn-street, Redfern.	Hosiery	45	Employing girl under 16 years without certificate of fitness.	G	1	0	0	0	7	0
,,	Penrith	Andrews, Fredk.	Kingswood	Sawmill	38	Failing to report an accident.	G	1	0	0	0	6	0
,,	,, ...	Blacktown Timber Co., Ltd.	Blacktown	,, ..	38	,, ,,	G	1	0	0	0	6	0
11/16	Newtown ...	Busch, Herman.	Samuel-street, St. Peters.	Joinery	33	Failing to fence millgearing.	N G	5	0	0	0	6	0
11/16	Sydney.....	City Mfg. Co., Ltd.	383 Sussex-street, Sydney.	Condiments ...	43	Employing female overtime on more than three consecutive days	G	1	0	0	0	6	0
,,	,, ...	,,	,, ...	,, ...	43	Failing to notify overtime.	G	1	0	0	0	6	0
				NEWCASTLE DISTRICT.									
4/3/16	Newcastle ...	Chambers, Thomas.	Waratah	Soap	Reg. 16	Failing to provide lavatory accommodation.	G	1	0	0	0	6	0
,,	,, ...	Moore, Augustus	Darby-street, Newcastle.	Aerated waters	33	Failing to fence millgearing.	G	2	0	0	0	6	0
,,	,, ...	,, ,,	,, ,,	,, ,,	20	Failing to keep factory in a cleanly state.	N G	Dismissed.					
7/4/16	,, ...	Cook, Herbert...	183 Darby-street, Newcastle.	Clothing ...	43	Failing to notify overtime.	N G	1	0	0	0	6	0
,,	,, ...	Johnson, P. ...	Darby-street, Newcastle.	,, ...	33	Failing to fence dangerous machinery.	G	2	0	0	0	6	0
4/4/16	,, ...	Cook, Andrew, Ltd.	Church-st. West, Newcastle.	Joinery... ...	34	Failing to fence circular saw.	N G	0	10	0	0	6	0
,,	,, ...	McGill, Samuel	,, ,,	,, ...	34	,, ,,	N G	0	10	0	0	6	0
5/4/16	,, ...	Morrison and Bearby, Ltd.	Cowper-street, Carrington.	Engineering ...	33	Failing to fence millgearing.	N G	0	10	0	0	6	0
3/5/16	,, ...	Murray, J , Ltd.	Cameron-street, Hamilton.	Furniture ...	34	Failing to fence circular saw.	G	1	0	0	0	6	0
3/5/16	,, ...	Thomas, Evan...	493 Hunter-street, Newcastle.	Smallgoods ...	33	Failing to fence millgearing.	Ex parte.	2	0	0	0	6	0
,,	,, ...	Sutcliffe, A. ...	Broadmeadow, Hamilton.	Engineer ...	33	,, ,,	N G	1	0	0	0	6	0
5/5/16	Wyong ...	Hely, Bros., Ltd.	Dora Creek ...	Sawmill ...	33	,, ,,	N G	0	5	0	0	6	0
,,	,, ...	Goldsmith, G....	Wyong Creek ...	,, ...	34	Failing to fence circular saw.	G	1	0	0	0	6	0
,,	,, ...	Hasell, A. H. ...	Alison-rd., Wyong	,, ...	34	,, ,,	G	1	0	0	0	6	0
6/6/16	Singleton ...	Gould, Amos ..	Singleton	,, ...	33	Failing to fence millgearing.	G	1	0	0	0	6	0
6/6/16	Newcastle ...	Broken Hill Pty. Co. Ltd.	Port Waratah ...	Steel works ...	33	,, ,,	N G	Dismissed.					
7/7/16	,, ..	Stuart, Edward	Brewery lane, Wickham.	Cooper	34	Failing to fence circular saw.	G	2	0	0	0	6	0
7/7/16	,, ...	Patey, J. H. ...	Newcomen-street, Newcastle.	Joinery... ...	33	Failing to fence dangerous machinery.	G	1	0	0	0	6	0
,,	,, ...	Pogonoski, R ...	13 Newcomen-st., Newcastle.	Printing ...	40	Employing child under 14 years without special permission.	G	2	0	0	0	6	0
9/9/16	,, ...	McGill, Samuel	Church-st. West, Newcastle.	Joinery... ...	33	Failing to fence dangerous machinery.	N G	Dismissed.					
11/16	,, ...	Cook, A., Ltd.	,, ,,	,, ...	38	Failing to report an accident.	G	1	0	0	0	7	0
				REST OF STATE.									
1/1/16	Goulburn ...	Gillespie & Co., Ltd.	Auburn-street, Goulburn.	Boots	33	Failing to fence millgearing.	G	1	0	0	0	6	0
2/2/16	Murrumburrah.	Reid, David ...	Albury-street. Murrumburrah.	Coachbuilding...	33	,, ,,	G	5	0	0	0	6	0
,,	,, ...	Chamberlain, R. J.	,, ,, ...	,, ...	7	Being in occupation of an unregistered factory	G	5	0	0	0	7	0
3/3/16	Goulburn ...	Dennis, P. V. ...	Auburn-street, Goulburn.	Tailor	43	Failing to record overtime.	N G	1	0	0	0	6	0
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	43	Failing to pay time and a half for overtime.	N G	2	0	0	0	8	0

FACTORIES AND SHOPS ACT, 1912—*continued.*

Date.	Locality.	Defendant. Name.	Defendant. Address.	Class of Factory.	Breach. Sec.	Breach. Nature.	Plea.	Penalty. £ s. d.	costs. £ s. d.
				REST OF STATE—*continued.*					
20/3/16	Goulburn ...	Dennis, P. V. ...	Auburn-street, Goulburn.	Tailor	43	Employing female overtime on more than three consecutive days	...	Withdrawn.	
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	68	Failing to pay tea-money.	...	,,	
28/4/16	Quirindi ...	Wyburn, Thomas.	Henry-street, Quirindi.	Sawmill ...	34	Failing to fence circular saw.	N G	Dismissed.	
23/5/16	Lithgow ...	Hoskins, G. & C., Ltd.	Lithgow	Ironworks ...	33	Failing to fence mill-gearing.	N G	2 0 0	0 8 0
16/6/16	Quirindi ...	Wyburn, Thomas.	Henry-street, Quirindi.	Sawmill ...	33	Failing to fence dangerous machinery.	N G	Dismissed.	
12/7/16	Berrigan ...	Rintoule, E. M.	Chanter-street, Berrigan.	*.....	56	Failing to comply with order.	G	1 0 0	0 6 0
,,	,, ...	Hickey, M. P...	,, ,, ...	Smallgoods ...	33	Failing to fence mill gearing.	G	1 0 0	0 6 0
14/7/16	Tocumwal ...	Boyle, Terence..	Tocumwal ..	Sawmill ...	33	,, ,,	Summons not served.		
,,	,, ...	Hoyle, Frank ..	,, ...	Printing ...	33	,, ,,	N G	3 0 0	0 6
20/7/16	Deniliquin ...	Evans, George...	Deniliquin ...	Smallgoods ...	33	,, ,,	G	1 0 0	0 6
,,	,, ...	Carew, M. J. ...	,, ...	,, ..	33	,, ,,	G	1 0 0	0 6
,,	,, ...	Boll, P. A. ...	,, ...	Engineer ...	33	,, ,,	G	1 0 0	0 6
25/7/16	Narrandera ...	Wise, Bros., Ltd.	Narrandera ...	Milling	33	,, ,,	G	1 0 0	0 6
,,	,, ...	Lincoln & Co., Ltd.	,, ...	Brewery ...	33	,, ,,	G	0 2 6	0 6
28/7/16	Coolamon ...	Linsell, James...	Coolamon ...	Smallgoods ...	33	,, ,,	N G	0 5 0	0 10
4/8/16	Bathurst ...	*Bathurst Times* Newspaper Co., Ltd.	William-street, Bathurst.	Printing ...	44	Employing boy under 16 years in restricted part of factory.	...	Withdrawn.	
11/8/16	Yass	Howard, J. W.	Cooma-street, Yass	*.....	56	Failing to comply with order.	G	0 10 0	0 6
18/8/16	Tumut ...	Beegling, C. W.	Russell-st., Tumut	Smallgoods ...	7	Being in occupation of an unregistered factory	G	0 10 0	0 6
,,	,, ...	Groves, Spencer	,, ,, ...	Printing ...	7	,, ,,	G	0 10 0	0 6
,,	,, ...	Hogan, A. B. ...	Fitzroy-st., Tumut	Engineering ...	7	,, ,,	G	0 10 0	0 6
25/7/16	Cootamundra	Pinkstone, F. ...	Wallendoon-street, Cootamundra.	Printing ...	7	,, ,,	Summons not served.		
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	45	Employing boy under 16 years without a certificate of fitness.	,,	,,	
21/8/16	Goulburn ...	Dennis, P. V. ...	Auburn-street, Goulburn.	Tailoring ...	20	Failing to keep factory in a cleanly state.	N G	3 0 0	0 6
,,	,, ...	,, ,, ...	,, ,, ...	,, ...	Reg. 15	Failing to screen w.c's	G	1 0 0	0 6
8/9/16	Armidale ...	Simmons, Charles.	Rusden-street, Armidale.	Cordials ...	7	Being in occupation of an unregistered factory.	G	0 10 0	0 6
13/9/16	Queanbeyan	Hayes & Russell, Ltd.	Queanbeyan ..	Store	20	Failing to keep shop in a cleanly state.	G	8 0 0	0 6
,,	Manilla ...	Baker, Henry M.	Manilla-street, Manilla.	Coachbuilding..	33	Failing to fence mill-gearing.	G	1 0 0	0 6
7/10/16	Orange	Bower, James ...	Lord's place, Orange.	Printing ...	45	Employing boy under 16 years without a certificate of fitness.	G	0 5 0	0 8
31/10/16	Tamworth ...	Cooper, Max ...	Fitzroy-street, Tamworth.	Joinery... ...	33	Failing to fence mill-gearing.	G	0 10 0	0 6
,,	,, ...	Regan Palace Roller Flour Mills, Ltd.	,, ,, ...	Flour	33	,, ,,	G	0 10 0	0 6

* Sued as Owner.

TABLE XXXV.

PROSECUTIONS in each District during the year 1916.

District.	Informations Laid.	Convictions.	Dismissals.	Withdrawals (Costs Paid.)	Withdrawals (Other).
Metropolitan	168	154	6	.....	8
Broken Hill	.....	.....	.....	.....	.....
Newcastle	23	18	5	.....	.....
Rest of State	33	27	.....	.....	6*
Total	224	199	11	.....	14

* Summons not served in 3 cases.

PROSECUTIONS, 1912–16.

Year.	Informations Laid.	Convictions.	Dismissals.	Withdrawals.
1912	124	118	3	3
1913	90	89	1	.....
1914	177	168	2	7*
1915	410	387	9	14
1916	224	199	11	14

* Costs paid in 1 case.

[Diagrams.]

Sydney: William Applegate Gullick, Government Printer.—1917.

1922.

(SECOND SESSION.)

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

EPARTMENT OF LABOUR AND INDUSTRY.

REPORT

ON THE WORKING OF THE

ACTORIES AND SHOPS ACT 1912

DURING THE YEAR 1921.

Printed under No. 14 Report from Printing Committee, 9 November, 1922.

SYDNEY: JOHN SPENCE, ACTING GOVERNMENT PRINTER

1922.

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THE TWENTY-FIFTH SERIES OF ANNUAL REPORTS BY INSPECTORS APPOINTED UNDER THE FACTORIES AND SHOPS ACT, 1912, FURNISHED TO THE MINISTER FOR LABOUR AND INDUSTRY IN TERMS OF SECTION 19 OF THAT ACT.

The Under Secretary, Department of Labour and Industry, to The Honorable the Minister for Labour and Industry.

Department of Labour and Industry,
1st November, 1922.

Sir,

I have the honour to forward for submission to Parliament, in terms of section 19 of the Factories and Shops Act, 1912, Annual Reports on the operations of that Act by each of the Inspectors appointed thereunder, for the year ending the 31st December, 1921.

I have, &c.,
E. J. PAYNE,
Under Secretary.

OFFICE OF THE CHIEF INSPECTOR OF FACTORIES AND INVESTIGATION OFFICER.*

Operations.

Report in terms of Section 19 of the Factories and Shops Act, 1912.

Arrangement of Inspectorial Districts.

The provisions of the Factories and Shops Act were extended to cover the whole of the State, as from the 1st July, 1915. The area outside of the Metropolitan District is divided up into Country Districts, and the following statement will show the arrangement of these districts at the close of 1921 :—

District.	Head Centre.	Staff.
Newcastle	Newcastle	Senior Inspector Huntley. Inspector Clark. ,, Middlemiss.
North Coast	Lismore	Inspector McEvoy.
North Western	Tamworth	,, Young.
South Coast	Wollongong	,, Waugh.
South Western	Goulburn	,, Wallace.
Southern	Wagga	,, Durack.
Western	Orange	,, Baker.
Broken Hill	Broken Hill	Inspector Henstock.

In addition to their work of factory inspection, the Country District Officers are required to carry out work as Inspectors under the Industrial Arbitration Act and the Early Closing Acts, as well as that pertaining to the Departmental policy of Country Labour Exchanges.

Pursuant to the Ministerial determination to provide for the interchange of Inspectors in the various districts at regular periods, changes in the country Inspectorial Staff at Newcastle and Wagga Wagga were made during the year.

Mr. Kenneth Armstrong was appointed an inspector under the Factories and Shops Acts on the 23rd May, 1921.

Mr. Inspector George Gregory resigned from the Public Service as from the 24th June, 1921.

Statistics.

Cards of instruction served on the occupiers of factories within the Metropolitan District numbered 15,546 for 1921, as compared with 15,288 in 1920; in the Newcastle District, 2,563 in 1921, as against 3,052 in 1920; in the Broken Hill District, 167 in 1921, compared with 274 in 1920; in the rest of the State 4,920, as against 4,168 in the previous year.

Returns collected from factory occupiers for 1921 show that at the date of collecting the returns (26th November, 1921) 10,087 factories throughout the State employed 122,384 persons, compared with 9,745 factories employing 126,045 persons at the end of 1920, an increase of 342 factories and a decrease of 3,661 persons. Of this decrease, the first since 1916, 3,747 or 102·3 per cent. were males, of whom 3,710 were over 21 years of age. Female employment increased by 86, there being an increase of 523 under 21 years of age, and a decrease of 437 over that age. Of the total persons employed, 88,819, or 72·6 per cent., were male, and 33,565 or 27·4 per cent. were female.

---

* Matters covered by the Boiler Inspection Regulations made under Section 62 of the Factories and Shops Act, 1912, are reported upon by the Departmental Engineer and Chief Inspector of Scaffolding and Lifts.

The following statement will show the increase or decrease in the number of factories and persons, males and females, employed therein, from the year 1915, when the whole of the State was brought under the provisions of the Act, to 1921 inclusive :—

Year.	Factories registered.	Increase over previous year.	Persons employed		Total.	Increase over previous year.		Total.	Percentage of total increase.	
			Males.	Females.		Males.	Females.		Males.	Females.
1915	7,425	1,432	70,517	28,706	99,223	7,181	1,901	9,082	79·1	20·9
1916	8,065	640	63,895	28,757	92,652	*6,622	51	*6,571	*100·8	0 8
1917	8,099	34	66,066	29,185	95,251	2,171	428	2,599	83·6	16·4
1918	8,346	247	74,719	31,246	105,965	8,653	2,061	10,714	80·8	19·2
1919	9,003	657	84,474	32,431	116,905	9,755	1,185	10,940	89·2	10·8
1920	9,745	742	92,566	33,479	126,045	8,092	1,048	9,140	88·6	11·4
1921	10,087	342	88,819	33,565	122,384	*3,747	86	*3,661	102·3	2·3

*Decrease.

The number of effective registrations of factories as at the 31st December, 1921, was 10,045, as compared with 9,718 at the close of the preceding year.

The following statement shows the numerical alteration in factory registrations at 31st December, 1920 and 1921 :—

District.	Registrations effective at 31st December, 1920.	1921.		Increase.	Registrations effective at 31st December, 1921.
		Registrations.	Cancellations.		
Metropolitan	5,765	1,526	1,239	287	5,914
Newcastle	940	242	167	75	1,016
Broken Hill	136	15	14	1	139
Rest of State	2,877	680	574	106	2,976
Total	9,718	2,463	1,194	469	*10,045

* Adjusted figures.

Detailed figures as to the number and classes of factories, number and sex of employees, and horse-power of machinery used in the various districts of the State will be found in the Appendices I to XII.

On the 26th November, 1921, there were 5,934 registered factories in the Metropolitan District, employing 95,159 persons, an increase of 92 factories and a decrease of 4,694 persons, compared with the figures at the end of the previous year. Of this decrease, females represented an increase of 39, or ·8 per cent., and males a decrease of 4,733, or 100·8 per cent., 4,617 or 97·5 per cent. of which were over 21 years of age. Of the total persons employed, males represented 63,850, and females 31,309, or 67·1 and 32·9 per cent. respectively. Only 5,874, or 6·2 per cent., were under 16 years of age; 10,902, or 11·5 per cent., were between 16 and 18 years; 13,144, or 13·8 per cent., were between 18 and 21 years; and the remainder, 65,239, or 68·5 per cent., were over 21 years or age.

Of the total males employed, 2,449, or 3·8 per cent., were under 16 years of age; 5,341, or 8·4 per cent., between 16 and 18 years; 6,210, or 9·7 per cent., between the ages of 18 and 21; and the remainder, 49,850, or 78·1 per cent., were over 21 years of age.

Of the total females employed, 3,425, or 10·9 per cent., were under 16 years of age; 5,561 or 17·8 per cent., between 16 and 18 years; 6,934, or 22·1 per cent., between the ages of 18 and 21 years; and the remainder, 15,389, or 49·2 per cent., were over 21 years of age.

It is satisfactory to report that out of a total employment in the Metropolitan District of 95,159, only 5,874, or 6·2 per cent., were under 16 years of age. A comparison of the figures of each sex under and over 21 years of age is somewhat interesting, inasmuch as it demonstrates that, whereas the difference between the number of females of these ages is slight, the excess of males over 21 years of age is large. There were more females than males under 21 years of age employed in the factories in the Metropolitan District, but the males over 21 years of age exceeded the number of females over that age in the proportion of more than 3 to 1.

During the period of 1912 to 1914 the percentages of boys and girls under 16 years of age remained about the same, but for the period 1914 to 1921 the percentage slightly increased, as the following table will show :—

Percentage distribution of persons under 16 years of age.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1912	2·3	2·9	5·2	1917	2·5	3·4	5·9
1913	2·2	2·8	5·1	1918	2·4	3·3	5·7
1914	2·3	2·9	5·2	1919	2·6	3·4	6·0
1915	2·8	3·1	5·9	1920	2·5	3·4	5·9
1916	2·6	3·3	5·9	1921	2·6	3·6	6·2

Taking

Taking the males and females under 16 years of age collectively, there was a slight decrease during 1913 over the previous year, but from 1914 to 1921 the percentage gradually increased, equalling in 1915, 1916, and 1917 that for 1920, as the table indicates. The percentage for 1918 was slightly below that for the three previous years, being 5·7 as against 5·9, but for 1921 it was higher than for any year since 1909, when it was 6·8. The tendency seems to be for females to increase steadily, whilst males fluctuate.

The industry class employing the greatest number of persons in 1921 was clothing and textile fabrics, with 26,145, followed by metal works, machinery, &c., with 14,185, and food and drink, &c., with 13,775, these three classes accounting for 54,105 out of a total of 95,159 employed in all classes of factories in the Metropolitan District.

Clothing and textile fabrics showed a slight increase of 545, but metal works, &c., and food and drink decreased by 671 and 622 respectively, as compared with 1920. The largest decrease in employment (1,099) was in ship and boat building.

The following statement will show the increase or decrease in persons, males and females, from 1897 to 1921 inclusive :—

Year.	Persons employed.			Increase over previous year.			Percentage of total increase.	
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
1897	22,586	7,009	29,595	.....	.....	.....	.....	.....
1907	39 157	19,063	58,320	2 957	1,472	4,429	66·8	33·2
1911	52,085	25,420	77,505	4,529	1,891	6,420	70·5	29·5
1912	55,559	26,108	81,667	3,474	688	4,162	83·5	16·5
1913	57,891	26,314	84,205	2,332	206	2,538	91·9	8·1
1914	54,455	24,884	79,339	*3,436	*1,430	*4,866	*70·6	*29·4
1915	54,891	26,438	81,329	436	1,554	1,990	21·9	78·1
1916	47,378	26,649	74,027	*7,513	211	*7,302	102·9	2·9
1917	48,927	27,223	76,150	1,549	574	2,123	72·9	27·1
1918	55,355	29,145	84,500	6,428	1,922	8,350	77·0	23·0
1919	62,030	30,309	92,339	6,675	1,164	7,839	85·2	14·8
1920	68,583	31,270	99,853	6,553	961	7,514	87·2	12·8
1921	63,850	31,309	95,159	*4,733	39	*4,694	*100·8	·8

* Decrease.

The following table shows the increase in number of factories and persons employed therein during the period 1897 to 1921 :—

Year.	Number of factories.	Increase over previous year.	Persons employed.	Increase over previous year.
1897	1,673	.....	29,595	.....
1907	2,840	50	58,220	4,429
1911	3,843	173	77,505	6,420
1912	3,989	146	81,667	4,162
1913	4,322	333	84,205	2,538
1914	4,579	257	79,339	*4,866
1915	4,758	179	81,329	1,990
1916	4,814	56	74,027	*7,302
1917	4,799	*15	76,150	2,123
1918	4,942	143	84,500	8,350
1919	5,330	388	92,339	7,839
1920	5,842	512	99,853	7,514
1921	5,934	92	95,159	*4,694

* Decrease.

Total increase—4,261 factories, 65,564 persons.

As at 26th November, 1921. 1,017 registered factories in the Newcastle District employed 13,304 persons, of whom 11,234, or nearly 90 per cent., were males, and 1,315, or nearly 10 per cent., were females. 64·2 per cent. of the females employed in the Newcastle District and 14 per cent. of the males were under 21 years of age. The large percentage of adult male employment was due to a great extent to the number employed at the steel and iron works of the Broken Hill Proprietary Company, Limited, at Port Waratah, 4,420 ; the Sulphide Corporation Limited at Cockle Creek, 381 ; the Commonwealth Steel Products, Limited, 299 ; Lysaght's Newcastle Works, Limited, 263 ; A. Goninan & Co., Limited, 247 ; Rylands Bros. (Aust.) Limited, 232 ; J. and A. Brown, 174 ; and Morison and Bearby, Limited, 127, aggregating 6,143, or 59·6 per cent. of the total number of males over 21 years of age.

In the remainder of the State, there were on 26th November, 1921, on the records of the Department, 3,136 registered factories, employing 13,921 persons, of whom 12,980, or 93·2 per cent., were males, and 941, or 6·8 per cent., females. This was an increase of 169 factories and 240 persons, as compared with 1920.

Horse-power of Machinery.

At the end of the year 1921, 7,431 factories throughout the State were using machinery equal to 238,570 horse-power.

Steam power, representing 138,930 horse-power, was used in 1,205 factories ; gas power (16,312 horse-power) in 1,039 factories ; electricity and other (83,328 horse-power) in 5,187 factories.

Child Labour in Factories.

One hundred and sixty-nine children under 14 years of age (125 boys and 44 girls) were granted the special permission of the Minister to engage in factory employment. Six thousand four hundred and twenty-one children were certified as physically fit for employment in certain classes of factories, and the examining Medical Officer declined to so certify in two cases.

Following is a table showing the distribution of the above permits and certificates in the districts in which the State is divided for Departmental purposes :—

District.	Permits granted.			Certificates of Fitness.	
	Special (to children between 13 and 14 years of age).			Issued.	Declined.
	Males.	Females.	Total.		
Metropolitan	121	44	165	5,875	2
Newcastle	2	.....	2	419	.....
Broken Hill	1	.....	1	12	.....
Rest of State	1	.....	1	115	.....
Total	125	44	169	6,421	2

By way of comparison, the numbers of special permits granted during the last ten years are shown hereunder, and the allocation of the children who were granted certificates into the various industries is shown in Appendix X,

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1912	154	4	158	1917	115	28	143
1913	160	9	169	1918	134	31	165
1914	152	8	160	1919	200	37	237
1915	143	6	149	1920	142	38	180
1916	162	14	176	1921	125	44	169

Appeal Case.

The following decision of the Supreme Court, on appeal, with regard to the application of section 43 of the Factories and Shops Act, is recorded :—

On 27th September, 1921, Mr. Justice Wade gave a determination on a special case stated by a Stipendiary Magistrate in respect of a prosecution undertaken by the Department under section 43 (1) of the Factories and Shops Act, 1912. The case arose out of overtime work on Saturday by a female employee in an industry subject, by proclamation under the Eight Hours Act, 1916, as amended by the Eight Hours (Amendment) Act, 1920, to a 44-hour week, which by agreement of employer and employees was worked in five days, and the Court held that the section of the Factories and Shops Act mentioned was not applicable in the circumstances.

GOLDING *v.* SNELLING.

Special Case.

Judgment.

Wade, J. This is a special case stated by a Stipendiary Magistrate under the following circumstances. The defendent was charged with a breach of the Factories and Shops Act, 1912, in that a female was employed overtime in the said factory for a period exceeding three hours on the 28th day of May, 1921, beyond the usual working hours of the factory. In passing I may say that the information differs from the terms of the Act. The prosecution was under section 43, subsection (1) of the Factories and Shops Act, No. 39 of 1912, which is to the effect that "any female may be employed overtime in a factory for a period not exceeding three hours in any day beyond the ordinary working hours on not more than thirty days in a year," and I assume for the purpose of my judgment that the information is intended to represent the wording of the statute. The stipendiary Magistrate determined that proceedings for the offence charged should be instituted under the award governing the industry and not under section 43, subsection (1) as above mentioned, and further that the matter hereinbefore stated was insufficient to support the information.

It is necessary, in order to understand this matter, to trace the legislation on the subject. The Factories and Shops Act of 1912 provided for various matters, such as sanitation, protection of dangerous machinery, and also contained a special provision limiting the hours of employment for youths and females. Section 43, subsection (1), prohibited the employment of any female in a factory for more than 48 hours in any one week. To this there were, however, certain qualifications. A female might be employed overtime for a period not exceeding three hours in any day beyond the "ordinary working hours," but such overtime should not be worked on more than three consecutive days, nor on more than thirty days in a year, unless by written permission of the Minister in a special case. At that time the "ordinary working hours" in a factory were governed by usage or by awards of the Arbitration Court. The two terms, however, "overtime" and "ordinary working hours," are co-relative, overtime denoting a period of work after the termination of the ordinary working hours.

The Eight Hours Act, No. 11 of 1916, placed certain limitations on the hours of work in various industries. The Eight Hours Amendment Act, No. 28 of 1920, repealed the greater part of the Eight Hours Act, and introduced a new method for arriving at the "ordinary working hours." By the Amending Act a special Court of Inquiry was set up to inquire

inquire into the desirability of adopting, *inter alia*, a working week of 44 hours, and such Court was empowered to report and make recommendations to the Minister. Section 13 provides that the "Governor may, by proclamation in the *Government Gazette*, adopt the report and recommendation of the Special Court and declare that the working hours recommended by the Special Court shall from a date to be fixed by the proclamation be the ordinary working hours for the employees therein mentioned, subject to any limitations, restrictions, and qualifications or conditions contained in the report." Section 14 provided that, notwithstanding the provisions of any award or industrial agreement, the working hours fixed by any proclamation shall, subject as aforesaid, be deemed to be fixed by this Act to be the "ordinary working hours" for the employees mentioned in the proclamation; and the provisions of the proclamation shall be binding and enforceable in the same manner as if they had been made by or included in an award of the Court or the Board. Accordingly, in pursuance of the above Act, the proclamation was issued on 16th April, 1921, in respect of the industry of bookbinding carried on by the defendant, and it was declared (1) that the ordinary working hours for the employees should be 44 hours per week to be worked in five days, Monday to Friday inclusive, of eight hours, and one half day, Saturday, of four hours, and (2) in the event of any employer and his employees agreeing to work only on five days of the week there shall be no liability on the part of the employer to pay overtime for the daily period in excess of eight hours. Thus it appears that the ordinary working hours of the industry of 44 hours per week may be worked in either of the two ways. If the first alternative is adopted then overtime would commence at the expiry of the eight hours on any day, Monday to Friday inclusive, or at the expiry of four hours on Saturday. In the event of an agreement to work 44 hours in five days only, *i.e.*, eight hours forty-eight minutes each day, then overtime would not commence until after that period on any one of the five days. It is in effect an alternative way of stating the manner in which 44 hours are to be distributed. Under such circumstances, with work on each day of the week, overtime on Saturday would not commence until after 12 o'clock; with work on five days of the week only, the 44 hours would be reached by Friday evening; consequently any work on Saturday would be overtime. It seems clear according to the Act, and the defendant has in no way disputed it, that on the occasion in question the girl was working overtime. The defendant had adopted the five days per week system, and the girl in question was employed on that Saturday morning from 8 till 12. The plaintiff contended that Saturday was by proclamation declared to be one of the working days, and that she was in fact working overtime, and therefore section 43, subsection (1) of the Factories and Shops Act of 1912 applies, and she could only work for three hours. On the other hand the defendant urged that on account of his arrangement with his employees, Saturday was not an ordinary working day inasmuch as the 44 hours had already been reached in the previous afternoon, and it was simply a case of overtime, provided that the girl did not exceed the maximum number of hours allowed by the Factories Act.

I am of the opinion that section 43, subsection (1) was not intended to apply to a case of this character. The statute was aimed at preventing the physical strain imposed upon females by being compelled to work long hours of overtime in addition to the ordinary working hours of the factory, and the words of the section are "not exceeding three hours in any day beyond the ordinary working hours," but it was not intended, nor do the words of the Act suggest, that if she commenced work at 8 o'clock on Saturday morning she was to be allowed three hours only. This is a case not provided for, and this interpretation in no way destroys the safeguards set in favour of female labour. Presumably she had already worked 44 hours under the five-day week, and under section 43, subsection (1) no female shall be employed in a factory for more than 48 hours in any one week.

In my opinion, therefore, there was no offence committed in employing this girl from 8 till 12 of the day in question.

I hold that the Magistrate was right in stating that the evidence was insufficient to support the information, but was wrong in determining that proceedings for a breach should be instituted under the award and not under the Factories and Shops Act of 1912.

The case should be remitted to the Magistrate with this expression of my opinion.

Overtime in Factories.

During 1921 the Minister granted applications for extensions of overtime in respect of 10 factories, affecting 241 female employees. Similar permission was granted during the previous year in respect of 16 factories, involving 6 male and 177 female employees, and the figures for 1919 were 36 factories, 1 male and 467 females.

The following table sets out the classes of factory in which the additional overtime was worked:—

Class of Factory.	Factories.	Employees.		Total.
		Male.	Female.	
Class VII. Clothing and Textiles—				
Corset making	1	.....	180	180
Hat making	2	.....	25	25
Tailoring	1	.....	3	3
Total	4	.....	208	208
Class VIII. Printing, Bookbinding, &c.—				
Printing	4	.....	25	25
Total	4	.....	25	25
Class XIV. Chemicals and Drugs—				
Drug packing	1	.....	3	3
Total	1	.....	3	3
Class XVIII. Leather, &c.—				
Leather trunks	1	.....	5	5
Total	1	.....	5	5
Total, all Classes	10	.....	241	241

Fencing and Guarding of Machinery.

The provision of efficient safeguards to dangerous parts of machinery is constantly engaging the attention of Inspectors, and it is pleasing to report that satisfactory progress in this direction continued to be made during the past year.

An

An example is given in the safety devices which are now available for affixing to hydro extractors, more particularly those used in laundries. Many types of these machines are in use in this State, and for a long time were running without any protection for the operator. A few years ago an automatic power lock was designed to cover the basket opening whilst the mechanical power was applied to the machine, but the risk of accident was thereby only partially reduced. However, the result of further efforts is that there are now several types of efficient automatic safety covers which can be so fitted to these machines that the power cannot be applied to the machine until the cover is in position over the basket opening, nor can the cover be raised until the basket has practically ceased to revolve. With proper care and maintenance of these covers the risk of accident by the revolving basket of these machines should be practically eliminated.

Accidents in Factories.

During the year, Inspectors furnished reports upon 744 accidents in factories coming within the provisions of section 38, 10 of which proved fatal, and 136 resulted in permanent injury to workmen.

Following is an analysis of the reported accidents, and the extent of injuries:—

Extent of Injury.	Accidents Reported.				
	District.				Total.
	Metropolitan.	Newcastle.	Broken Hill.	Rest of State.	
Fatal	5	3	...	2	10
Permanent Injury—					
Loss of arm	1	...	1	...	2
,, hand	1	...	1	...	2
,, fingers	31	3	1	10	45
,, parts of fingers	70	9	...	7	86
,, toe	...	1	...	...	1
	103	13	3	17	136
Temporary Injury—					
Broken limbs	1	8	...	1	10
Burns, scalds, &c.	83	40	...	16	139
Cuts, lacerations, bruises—					
On hands	278	41	...	26	345
,, arms	13	1	...	3	17
,, body	17	5	...	6	28
,, feet	9	4	...	...	13
,, head	21	11	...	7	39
Other	6	...	...	1	7
	428	110	...	60	598
Total	536	126	3	79	744

The following statement gives the distribution of accidents as due to machinery or other causes, Appendix XI contains details of machinery at which accidents happened.

Causes of Accident.

Machinery

Metal working	198	Paper, printing	46
Woodworking	171	Leather	17
Stone, clay, &c.	7	Rubber	3
Food and drink	29	Other	10
Clothing, &c.	37		

Miscellaneous—

Mill gearing	48
Engines	9
Elevators, conveyors, &c.	26

Other Causes.

Dangerous substances—		Electricity	2
Steam	7	Chemicals	8
Hot substances—		Gas	6
Water	9	Other	7
Metal	83		
Other	21	Total	744

The accidents which resulted fatally are briefly described as follow:—

An employee at an ironworks in Alexandria was working in close proximity to a crane. The man failed to notice the crane in its passage towards him, and was struck and knocked across the rails. The crane moved backwards, and crushed the employee's right leg so severely as to necessitate amputation, and the left leg was fractured. So serious were the injuries that the man succumbed next day.

A miller at a large flour mill was using a stick to place a belt upon running counter shafting. He turned away, and the stick, coming in contact with the running pulley, was driven with great force into his head, inflicting fatal injuries.

A sawyer in a large sawmill was operating a circular saw, when a large piece of timber, approximately 20 feet by 5 inches by $\frac{7}{8}$ inch thick, fell on the back of the revolving saw and, being thrown forward with great force, struck the sawyer in the chest. Several ribs were broken, a lung was pierced, and practically instantaneous death was caused by severe internal hæmorrhage.

A similar employee, whilst operating a saw, noticed that the "riving knife" at the back of the saw was out of plumb through a small chip being caught between the knife and the bench. Whilst at the back of the saw endeavouring to free the obstruction, he slipped on the wet ground and fell, head first, on to the saw. He succumbed seven days later.

An

An employee at a country sawmill was pushed on to a revolving saw by one of a team of horses, which had been delivering a load of logs, stumbling as the team was being drawn away from the saw bench. The man's right arm and leg were amputated and he later succumbed to his injuries.

A man employed at a wire mill was scalded to death as a result of a fall into a vat of hot varnish. He was emptying a barrel of varnish, suspended from a crane, into the vat, when the barrel became detached from the crane-hook and fell into the vat, dragging the man with it.

A workman was engaged in fixing electric cables to a vertical column in close proximity to an electric travelling crane runaway in a machine shop. As the crane passed, the man's head was crushed between one of the axle boxes and the column, the injuries received being fatal.

An employee at a smelting establishment, greasing the pulleys of a conveyor, was caught by his shirt sleeve between a conveyor belt and a pulley and was thrown across the uncovered conveyor wheels. His injuries resulted fatally.

A furnaceman at a magnesite brickworks was found dead in a gas flue. It is supposed that, going into the manhole of the flue to clear away a stoppage, he was overcome with the gas and was suffocated. From statements made, the employees seemed unaware of the dangerous nature of the gas generated, carbon monoxide, and were accustomed to take risks.

A "tankman" at an ice works was caught in overhead shafting and was whirled round, receiving injuries which resulted fatally. It is surmised that the belt came off and the man climbed on some adjacent planks and endeavoured to put it on whilst the shafting was in motion, with the result stated,

Means of Escape in Case of Fire.

The alterations to existing factory buildings and the erection of new buildings for factory purposes necessitate the constant attention of Inspectors to the provisions of the Act relating to fire escapes. A number of "orders" were issued during the year, in some cases requiring the provision of escapes in accordance with the Act, and in others requiring existing escapes to be efficiently maintained.

In one instance it was found necessary to issue legal proceedings against an occupier who had failed, after ample warning, to provide proper and efficient means of escape for the employees in a four-storey building. A conviction was obtained and a penalty inflicted.

During the year eighty-five certificates that efficient means of escape from factories had been provided were issued by the Chief Officer of Fire Brigades.

Prosecutions.

During the year informations for breaches of the Factories and Shops Act and Regulations were laid in eighty-one cases. Five cases were dismissed and one withdrawn, and convictions were obtained in the remainder (seventy-five).

Following are the details:—

Section.		Convictions.	Dismissals.	Withdrawals.	Total.
7	Being in occupation of an unregistered factory	5	.....	.....	5
11	Obstructing an inspector	2	.....	.....	2
20	Failing to keep premises in a cleanly state	8	.....	.....	8
33	Failing to fence dangerous machinery	20	2	1	23
38	Failing to report accidents	5	.....	.....	5
39	Failing to provide means of escape in case of fire	1	.....	.....	1
41	Employing boys under 16 on prohibited machines	2	.....	.....	2
42	Employing female for more than 5 hours without interval	1	.....	.....	1
43	Breaches of overtime provisions	11	2	.....	13
45	Employing children under 16 without certificates	7	.....	.....	7
46	Employing female between 6 p.m. and 6 a.m.	2	.....	.....	2
49	Working or permitting work in furniture factories after hours	2	.....	.....	2
56	Failing to comply with Magistrate's Order	...	1	.....	1
Regulation.					
15	Failing to provide W.C. accommodation	3	.....	.....	3
16	Failing to provide wash-basins	1	.....	.....	1
19	Obstructing fire-escape landings	3	.....	.....	3
15 of 8-9-15	Chlorate of potash Regulations	2	.....	.....	2
	Total	75	5	1	81

EARLY CLOSING ACTS.

In 1921, breaches of the Early Closing Act to the number of 571 were detected and reported upon by Departmental Inspectors. Of the offenders concerned, 350 were warned by letter and the remainder (221) were proceeded against for 221 breaches, details of which are given hereunder. Penalties amounting to £164 19s. 6d., with costs, £87 5s. 6d., were imposed. Three cases were dismissed and 1 withdrawn.

Section 7.—Keeping shop open after hours	217 cases.
,, 8.—Employing assistant for more than half an hour after the closing time	1 case
,, 9.—Failing to allow half-holidays to assistants	2 cases.
,, 12.—Delivering bread on third Wednesday of month (Carters' holiday)	1 case.
Total	221 cases.

SHEARERS'

SHEARERS' ACCOMMODATION ACT.

The provisions of the Shearers' Accommodation Act were reasonably complied with by station-owners and managers generally during the year throughout the State. Twenty-one new huts were built during 1921, in addition to twenty-eight during 1920 and forty-five during the previous year. Notices were served, in terms of section 10, upon sixty employers, forty-one of which were complied with at the end of the year, and the remaining nineteen will, no doubt, be attended to before the shearing operations of 1922 commence.

SUMMARY FOR THE YEARS 1919, 1920, 1921.

	Year.		
	1919.	1920.	1921.
Inspectors—			
Departmental	19	18	17
Police	313	313	318
Total	332	331	335
Inspectors reporting	272	270	273
Stations visited by Inspectors	1,413	1,354	1,402
Huts inspected—			
Found to be—			
(*a*) Satisfactory	1,574	1,566	1,632
(*b*) Unsatisfactory as to part	168	91	54
(*c*) Wholly unsatisfactory	18	18	13
Total	1,760	1,675	1,699
Notices and Certificates issued under Section 7 as to—			
(*a*) Cleanliness	.....	1	.....
(*b*) Damage	.....	.....	.....
Total	.....	1	.....
Notices under Section 10 served on Employers—			
Complied with during the year	116	42	41
Not yet complied with	61	45	19
Total	177	87	60
Summonses issued	3	.....	1
Convictions	1	.....	1
Dismissals	1	.....	.....
Withdrawals	1	.....	.....
Huts built during the year	45	28	21

FACTORIES AND SHOPS ACT, 1912.

Boiler Regulations.

During the year the Minister granted seven certificates of approval to inspect boilers, &c. One hundred and eighty-three certificates were in force at 31st December, 1921. One hundred and twelve accredited inspectors are located in Sydney and suburbs, thirteen in the Newcastle district, and fifty-four in country centres.

Eight thousand two hundred and thirty-eight reports, in connection with the inspection of steam boilers and other pressure vessels, were lodged by accredited inspectors as follows:—

	Reports received.		
	Boilers.	Other Pressure Vessels.	Total.
Prescribed Reports:—			
First Inspection with specification cards	456	288	744
Reinspection	2,721	2,314	5,035
Total	3,177	2,602	5,779
Non-prescribed Reports.—			
Internal	1,159	491	1,650
External	303	506	809
Total	1,462	997	2,459
Total	4,639	3,599	8,238

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The following is a summary of notices served upon factory occupiers, to ensure compliance with the requirements of the Boiler Regulations:—

	Boilers.	Other Pressure Vessels.	Total.
Pressure reduced	31	11	42
Pressure increased	25	13	38
Safety valves	13	22	35
Reducing valves	.....	4	4
Locked safety valves	30	7	37
Pressure gauges	9	11	20
Pressure gauge corrections	.....	.....	.....
Gauge-glass protectors	51	1	52
Water gauges	2	.....	2
Test cocks	16	.....	16
Cocks between check-valve and boiler	9	.....	9
Valve on steam connection	6	.....	6
Isolating valves	75	.....	75
Blow-off cocks	2	.....	2
Patches	.....	.....	.....
Fusible plugs	22	.....	22
New stays	.....	.....	.....
Total	291	69	360

During the year, 196 boilers and 130 other pressure vessels were newly installed, and fourteen boilers and one other pressure vessel were discarded. The number of the various types of boilers and other pressure vessels inspected is given in the following table:—

	Inspections.			Vessels.		
	First.	Re-inspections.	Total.	Discarded.	Newly Installed.	Explosions.
Boilers—						
Marine Wetback	1	5	6	.....	1	.....
„ Dryback	4	41	45	.....	2	.....
Multitubular	32	295	327	1	11	.....
Cornish	13	161	174	.....	7	.....
Vertical	140	615	755	8	65	.....
Colonial	110	738	848	3	56	.....
Locomotive, including Portable, Traction, and Road Rollers	96	326	422	2	21	1
Watertube	45	370	415	.....	26	.....
Lancashire	1	100	101	.....	1	.....
Cast-iron Sectional	2	14	16	.....	.....	.....
Jackass	11	29	40	.....	6	.....
Wolff	.....	3	3	.....	.....	.....
Egg-ended	1	6	7	.....	.....	.....
Other Steam Generators	.....	18	18	.....	.....	.....
Total	456	2,721	3,177	14	196	1
Pressure Vessels—						
Jacketed Vessels	91	717	808	.....	41	.....
Cylinders, Drying Drums, and Boilers (Steam Heated)	27	209	236	1	12	.....
Air and Water Receivers	42	289	331	.....	27	.....
Digestors	10	106	116	.....	5	.....
Hot Tables:—Presses, Drying Tables, Cantilever Presses, Patching Tables	13	122	135	.....	5	.....
Autoclave Presses	.....	7	7	.....	.....	.....
CO_2 Cylinders and Purifiers	14	127	141	.....	1	.....
Vulcanizers	42	183	225	.....	12	.....
Calenders, including Mangles	8	74	82	.....	6	.....
Steam-heated Rolls	.....	.....	.....	.....	.....	.....
Desiccators	.....	10	10	.....	.....	.....
Retorts	2	49	51	.....	1	.....
Vegetable Steamers	.....	3	3	.....	.....	.....
Copper Coils and Pipe Heaters	16	102	118	.....	13	.....
Monteju and Crystallizers	.....	14	14	.....	.....	.....
Vacuum Vessels	4	12	16	.....	.....	.....
Economisers	.....	8	8	.....	.....	.....
Steam Separators	1	12	13	.....	.....	.....
Stills	.....	9	9	.....	.....	.....
Sugar Driers	.....	3	3	.....	.....	.....
Sterilizers	.....	3	3	.....	.....	.....
Oil Receivers	.....	3	3	.....	.....	.....
Superheaters	.....	2	2	.....	.....	.....
Stout and Wine Butts	.....	125	125	.....	.....	.....
Steam-heated Vessels	16	112	128	.....	5	.....
Coolers	2	13	15	.....	2	.....
Total	288	2,314	2,602	1	130	.....
Total	744	5,035	5,779	15	326	1

The

The need for boiler inspectors to make their examinations thorough was evidenced during the year by a steam boiler explosion in a country district, which resulted in the death of two men and considerable destruction to property.

The exploded boiler, with its attached machinery, was of the type known as a "portable engine," usually associated with farm work. On the day of the accident, under a steam pressure of about seventy pounds per square inch in the boiler, the fire-box crown sheet came down with its four girders and bolt stays practically intact, leaving an opening into the steam space of about eight square feet.

The force of the explosion killed the boiler attendant and the owner, and projected the boiler about 150 feet from its original position, most of its machinery being stripped off in its flight.

It was found on examination after the explosion that the boiler was in parts severely corroded. The immediate cause of the explosion, however, was due to "grooving," or cracking in the crown sheet of the fire-box, close to the ends of the girder stays at the fire-door end.

The grooving of the plate was clearly the result of an original defect in the construction of the boiler, and was set up by the bending of the plate along the line of failure, owing to the girder stays being too short to transmit their load directly to the vertical plates leading to the foundation ring of the fire-box, consequently the bending action imposed upon the crown plate, which eventually lead to grooving, commenced at the time the boiler was first used, and the grooving became more aggravated as time passed.

The boiler was said to have been in use in various parts of the district under different ownership for upwards of forty years; this statement, if correct, indicates how slow the process of grooving in boiler may be. An increasing depth of such a defect must eventually result in rupture and explosion.

The boiler had been inspected some months before its failure and passed as satisfactory, and apparently the person conducting the inspection did not detect the grooving in the fire-box crown sheet.

An unusual explosion of an iron drum in an engineer's shop was investigated. The drum, discarded calcium carbide receptacle, was being used by an employee as a table to support an object which was being autogenously welded by the oxy-acetylene process. During the welding operation the drum violently exploded, tearing the metal in a circumferential direction; the fractured metal struck the workman, causing slight injuries to his legs.

Small quantities of calcium carbide were found adhering to the bottom of the drum, and on the ground in the vicinity; upon being tested the material was found almost depleted of its gas producing qualities. It would appear that some of the live calcium had been left in the drum, and that its exposure to moisture had caused the generation of acetylene gas which, upon being brought into contact with the operator's torch, ignited, thus causing the explosion.

Subsequent to a complaint being made to the Departmental Engineer in connection with repairs to a vertical boiler, recently installed in a factory, in Sydney, an inspection was made by a departmental inspector.

It was ascertained that two holes each 10 inch diameter had been cut in the shell plates to permit of the removal of a defective galloway tube and the substitution of a new one in the fire-box, and that circular cover plates had been placed over the aperture, on the inside of the shell plates, and welded externally by means of the oxy-acetylene process. This procedure indicated gross ignorance concerning boiler stresses; the welds were subject to direct tensional stress, and as this is a contravention of the requirements of the Department the vendor was advised that the Department would not allow the boiler to be used under pressure unless the cover plates were efficiently riveted to the shell.

A sketch was then submitted by the vendor showing proposed riveting; the joint efficiency appeared to be in order, and the alterations were proceeded with. A later departmental inspection, however, disclosed the fact that the dimensions given on the sketch were not consistent with actual conditions, there being insufficient lap to give sufficient strength in the plate sections; in consequence the boiler was condemned.

The vendor then replaced it with a similar class of boiler, which was apparently without defect.

The unification of the boiler construction rules of the British Board of Trade, Lloyds' Register of Shipping, British Corporation for the Survey and Registry of Shipping and Bureau Veritas, International Registry of Shipping were completed in 1920, and the following extract therefrom (Section II, clause 4) is of general interest as forming a basis of the Departmental Engineer's rulings in respect of autogenous welding, &c., of boiler plates.

> *Welding and other Treatment of Plates.*—No steel plates subject to a direct tensional stress are to be welded except where the weld is covered by a butt strap or straps. For small steam domes, by special permission where the welding is done by hammer and the plates do not exceed ½ inch in thickness, the straps may be omitted. The strength shall, in such cases, be assumed to be 50 per cent. of that of the solid plate. All steel plates which are welded, dished, flanged, or locally heated are to be afterwards efficiently annealed.

The Rules of the Interstate Commerce Commission of the United States concerning this matter as applying to steamships are less stringent but more comprehensive in that they state what may or may not be done to a boiler by the several welding processes, but in this connection the following extract from the report of the Chief Inspector, Bureau of Locomotive Inspection (for the final year, 1921), who is an official associated with the Commission referred to, is enlightening:—

> During the year there were a number of accidents investigated in which fire-box seams formed by the autogenous welding process were involved, where, through the failure of these seams, it is believed the result of the accident was much more serious than would otherwise have been. Autogenous welding can be used on many parts of the locomotive and tender and on parts of the stayed surfaces of the boiler with safety and economy, but inasmuch as our accident investigations show that approximately 80 per cent. of the autogenously welded seams fail, where they are involved in the

the accidents, we believe that such methods should be avoided in fire-box crown-sheet seams where overheating and failure are liable to occur, or on any part of the boiler where the strain to which the structure is subjected is not carried by other construction which fully meets with the requirements of the law and rules, at least until some means have been developed through which the quality and tenacity of the weld may be established in advance of its failure. This should apply on all parts of the locomotive and tender where, through failure, an accident and an injury might result.

It is a matter for regret that the Department has no direct control over the uses and many abuses of autogenous welding on boilers and other pressure vessels in this State. As means to make expeditious repairs the processes are so simple and inexpensive that there is reason for believing that it is practised in a manner and to an extent that would not meet with Departmental approval, and the existing plan of boiler and pressure vessel supervision precludes the possibility of the Departmental Engineer being satisfied that safe and workmanlike jobs are done.

Isolating valves constructed to conform with this regulation and fitted to steam mains common to two or more boilers would possess the following safety features :—

1. Prevent steam being turned on to men working in empty boilers.
2. In the case of steam being raised in a boiler, one of a range, the valve automatically cuts the boiler into line when its pressure is sufficient to lift the valve, thereby eliminating the hazard attendant upon cutting into line boilers carrying different pressures.
3. Prevent probable loss of life or expensive shut downs due to a ruptured boiler.
4. In case of rupture to steam lines and fittings, every isolating valve on the boilers in range closes, thus preventing steam flow, and eliminating the grave hazard such an accident would develop by the boilers in the range emptying their steam contents.
5. Permit of automatic testing from the boiler room floor while the valve is in use, and in emergent cases, the shutting down of a boiler from the same position by means of the same fittings and connections used in testing.

Mr. Superintending Inspector Armitage reports :—

Registrations.—The principal registration of the year was that of a factory, the establishment of which constitutes a consolidation of various engineering businesses for the purpose of constructing, erecting, and maintaining electric lifts and constructing hydro-electric generators. The site occupies about 6 acres on which are being erected modern workshops equipped with electrical appliances for manufacturing purposes, and also with lathes which, outside those used in the naval departments, are the largest in Australia. Another firm has commenced the manufacture of electric elevators, including the construction of motors, switches, cages and winding gear.

Sanitation.—In one new factory erected in a locality where an approved system of general sewerage is not available, septic tanks have been provided. Such a provision, I have pointed out to occupiers, is a saving financially, and is more hygienic and cleanly than the night soil system carried out in the western suburbs. Occupiers generally are lax in complying with Section 21 of the Act, which requires that factories (with few exceptions) should be limewashed at least once every 14 months. In most cases they are kalsomined or water coloured, which processes have little value as disinfectants and cannot compare with limewashing for the destruction of flies, dirt and microbes.

Ventilation.—As I have pointed out in previous reports, the depressing effect of the various gases generated in industrial processes call for increased ventilations by all practicable means.

Accidents.—The majority of accidents that have happened at power-presses, notwithstanding the efficiency of some of the guards provided, are due to carelessness of the operator as much as to the negligence of employer in allowing guards to become detached and failing to maintain their efficiency. In some cases resort has been had to prosecution in order to impress occupiers with their liability under the Act. In one instance when making inquiries into an accident reported at a press, I found a member of the firm operating the machine which was then without a guard, his excuse being that it could not be guarded. He was prosecuted, and afterwards had the machine fitted with a guard.

An accident at a circular saw whereby a youth lost his arm happened in an unregistered joinery factory. A guard was subsequently placed on the saw, and other parts of the mill gearing were fenced. Other accidents have happened at circular saws, but the hooded guard usually placed over the saw has undoubtedly saved many serious and perhaps fatal accidents.

Fencing of Machinery and Safety.—One of the largest laundry occupiers in the State was prosecuted for failing to securely fence a hydro-extractor. The case was defended in the interests of laundry proprietors generally, but the magistrate convicted, and in addition to inflicting a penalty, made an order that a hydro-extractor should have a cover that must be closed before the machine can be started, a device constructed so that the cover cannot be lifted until the basket is almost stationary. On the question whether the machine was dangerous, two women who had each lost an arm at a hydro-extractor attended the Court to give evidence.

Laundry occupiers who are users of similar machines are having them provided with covers that comply with this order.

The best type of cover is that controlled by the action of a ball race round the lower part of the spindle of the basket which locks the cover while the basket is revolving. Such a cover is made in Sydney. Another device is constructed by means of a locking tooth cog attached to the spindle of the basket so that a pawl running over this ratchet cog controls the cover while the basket is in motion, and the lid cannot be lifted till the basket is reversed so as to release the pawl. Two other devices are on the following principle :—The drive of the basket operates a small counter shafting connected with the hydro-extractor. By means of a screw on the counter shafting it draws a block along which locks the lid. This lid cannot be lifted until the basket has ceased to revolve, and the counter shafting is reversed by hand, when the block can be removed from the cover.

The most simple device is that of a cam fixed to the pulley of the hydro extractor which knocks a piece of steel, when it revolves, under the hood the distance of the projection of the cam and forces the steel rod of the cover under the casting of the hydro, thus forming a locking latch for the cover which cannot be lifted until the basket is stationary, when the steel rod is forced back from the cover.

Mr.

Mr. Senior-Inspector Burkitt reports :—

Registration of Factories.—A large number of new factories was registered, mainly in the suburban portions of my district, but not connected with industries new to the State.

Sanitation.—Generally speaking the provisions of the Act were faithfully carried out in this connection ; and though perfection was not usually attained, I had no occasion to report breaches, and in many cases found that commendable care had been taken to ensure observance. In a few cases the number of employees had outgrown the w.c. accommodation provided, but this was quickly rectified.

Fire Escapes.—In a number of cases, mostly in the city, I found that certificates had not been issued for escapes which had been approved years ago, and I arranged for reinspection of same, which resulted, in some instances, in alterations being made to bring them up to date.

Accidents, and Prevention of Same.—A boy was severely burned about the body through his clothing, which was permeated with chlorate of potash, coming in contact with fire outside the factory during the dinner-hour. Special regulations are in force, applicable to factories in which this commodity is used or stored, including one requiring employers to provide uninflammable overalls for all employees, which must be removed before leaving the factory. For failing to observe this regulation the occupier was prosecuted and fined. In addition to minor accidents, which were not due to preventable causes, two accidents reported upon by me called for prosecution. An unguarded power press resulted in the loss of an employee's finger. In this case a trigger-guard had been provided but the essential spring removed. An employee had his hand severely injured while removing the belt driving an emery wheel, where proper striking gear should have been provided. And in another case a man lost two fingers while working at a circular saw, the guard over which had been removed. I also reported on a number of other accidents of a minor character which were not due to preventable causes. The somewhat difficult question of finding adequate methods of guarding hydro-extractors has received my attention like that of all other inspectors, and it is satisfactory to find that the matter has now been brought to finality by the provision of suitable safety cover devices.

Mr. Inspector Aldington reports :—

Registrations.—A number of registrations was made during the year, the majority being in the City area. These represented, principally, small establishments.

Structural Conditions.—A few cases of structural alterations were recommended and carried out, thereby improving the working conditions of the employees concerned. In each case the recommendations were carried out in a satisfactory manner.

Sanitation.—Generally speaking, the sanitary provisions of the Act are well observed, though it has been found necessary to issue instructions to some occupiers to limewash their premises. Several cases have been noticed where dust exhaust installations have been ineffective. On investigation it was generally found that the fault was due to carelessness, the flues having become choked.

Fencing of Machinery.—It has been found that the fencing of machinery requires constant attention. The majority of the established factories are in possession of effective guards (for their various machines), but the guards are not always maintained on their respective machines. Some occupiers take the view that if they pay for a guard their obligation ends; it is for the machine operator to see that the guard is maintained on the machine. In these cases it is generally found that the operator either does not realise the risk he takes or he finds it too much trouble to replace the guard after adjusting his machine.

Fire Escapes.—On the whole fire escapes have been found to be satisfactory, there being very few cases where it was found necessary to instruct occupiers to keep the approach free of access.

Accidents.—No fatal accidents occurred in my district during the year. The majority of accidents inquired into proved to be of a minor nature.

Bakehouses.—It has been found that bakehouses are generally well kept. In only a few cases it was found necessary to issue instructions to lime-wash.

Mr. Inspector Armstrong reports :—

Registrations.—Many of the new factories dealt with by me for purposes of registration were of the smaller type engaged in the clothing trade.

Structural Conditions.—No case needing structural alterations or additions came under my notice, the tendency of employers in new premises being to favourably consider modern conditions prior to building.

Sanitation.—Generally speaking the sanitary conditions were good, the few offenders being apparently more careless than deliberate.

Fencing of Machinery.—I found that in most instances guards for dangerous machines had been supplied by the employers, but the employees persist in operating the machines with the guards removed ; this was instanced particularly in the case of emery wheels.

Fire Escapes.—No complaint could be made regarding fire escapes, both the employers and employees evidently recognising their value.

Accidents.—The only accidents investigated by me were of a minor nature.

Bakehouses.—All the bakehouses in the district are in a fairly satisfactory condition.

Certificates of Fitness.—I found it necessary to give instructions to many employers to obtain certificates of fitness for employees under 16 years of age. In some instances the employers had accepted a statement from the boys that their certificates were with a former employer, but investigation proved the reverse. The caution administered will no doubt cause the employers to be more careful.

Mr.

Mr. Inspector Davis reports:—

During the period under review I have to report that in the factories inspected by me in the Metropolitan area, embracing a number of suburbs, the conditions generally were found fairly satisfactory.

Registrations.—The registrations for the past twelve months were fairly numerous, and only in a few instances was it necessary to remind occupiers of their responsibility in this direction.

Structural Alterations.—Alterations have taken place with further extensions to factory premises in the Metropolitan area, which provided better working conditions when completed.

Sanitation.—In all new buildings to be used for factory purposes up-to-date methods have been adopted, and generally the sanitary arrangements have been found satisfactory.

Fencing of Machinery.—Special attention was given to the important matter of guarding dangerous machinery. Some occupiers have a tendency to use somewhat flimsy guards in fencing; orders were issued in such cases to more securely fence the machinery. All such orders were readily complied with.

Fire Escapes.—In company with an officer of the Metropolitan Fire Brigades several factories in the district were visited. The fire escapes that had to be provided were found upon completion to be satisfactory to the Department and the Chief Officer of Fire Brigades. In a few instances instructions had to be given to remove obstructions from the approaches and also from the landings of fire escapes.

Overtime.—Few notices to work overtime were given under this section of the Act, and I was not called upon to make any inquiries with regard to the working of special overtime.

Bakehouses.—The bakehouses situated in this district were fairly satisfactory; the principal instructions given to occupiers consisted of lime-washing the walls and ceilings of the bakehouses.

Accidents.—Although a number of accidents were reported no serious or fatal accidents occurred in the district during the year.

Certificates of Fitness.—I had occasion in a few instances to direct attention to the necessity for obtaining Certificates of Fitness for youths under 16 years of age. Occupiers appear to be beginning to realise their responsibility in this respect.

General.—The only factories which I found working at the limit of their capacity towards the end of the year were the clothing industries, viz., tailoring and bootmaking. I was assured that more labour could have been employed in these industries had it been available.

Mr. Inspector Dunleavy reports:—

Registrations.—During the year a large number of factories in my area was registered, and although some were of a substantial character, including a large motor-body and motor-engineering works, covering a couple of acres of ground, many factories registered were of the smaller type.

Sanitation.—Although most occupiers are anxious to observe the conditions regarding sanitation, I found it necessary to issue instructions to a number of occupiers to keep their factories in a more sanitary condition.

Fencing of Machinery.—The number of minor accidents caused through guards being removed should impress upon occupiers and operatives the necessity for paying close attention to the maintenance of fences on dangerous machinery. Many operatives who have been connected with dangerous machinery for many years still think that guards are unnecessary. On the other hand many occupiers and operatives pay strict attention to safeguarding, and are ready to accept suggestions from the inspectors.

Fire Escapes.—Fire escapes have received my attention again during the year. I had occasion during the latter end of the year to view a fire escape in the city area in company with a factory occupier. I was walking down the escape in question, which was situated on the outside of the building, when one of the treads gave way. The next moment the man behind me stood on a tread that I had passed over; it gave way also, and a third tread gave way similarly. On investigation it was found that the bolts that fastened the tread to the stringer had rusted away, with the result that the treads would not stand my weight. This happened on the portion of the escape between the second and third floors. This occurrence shows the necessity for a periodical inspection of all outside fire escapes

Accidents.—A few accidents occurred in my district during the year. The most serious occurred to a youth just over 16 years of age, who was employed, and injured, on a machine used for teasing fibre, in a fibrous-ceiling works. The machine was provided with a movable, though substantial, cover, which was off at the time of the accident. No intelligent account could be obtained as to why it was off. Some fellow-workers, who ran to his assistance when the accident occurred, found that he was entangled in the spikes of the drum. When he was extricated it was found that his arm was badly lacerated and torn, the bone protruding, necessitating amputation. I interviewed him after the accident, but he could not remember how his arm became entangled in the drum of the machine.

Bakehouses.—Most of the bakehouses in my area were kept in a satisfactory condition. The usual notices were given to a number of occupiers who had failed to limewash their premises.

Certificates.—In a number of instances it was found that persons under the age of 16 years were employed without first obtaining the necessary certificate of fitness, and, in other cases, that boys under 14 years of age in factories had not procured the special permission of the Minister to be so employed.

Mr. Inspector A. G. P. Jackson reports:—

Registration.—A considerable number of new registrations has been effected during the year in the City area, but comparatively few in the suburban and country districts.

Structural.—In several factories in my district it has been found necessary to make additions to factory premises to cope with expanding trade conditions, and in the woolwashing, dyeing, cleaning, and food industries substantial buildings have been erected.

Guarding of Machinery.—Guarding of machinery generally has been well maintained, but I have noticed a tendency among users of emery wheels in many instances to use guards of a flimsy character, useful only as spark guards, but totally inadequate in case of the stone breaking. In these cases I have ordered suitable guards to be installed.

Accidents.—One fatal accident was recorded. An employee was found dead in a cylinder used for the mixing of fertilisers. Just prior to his death he was chipping off some of the mixture which had adhered to the sides of the vessel. A weak heart was supposed to be the cause of his death.

Another accident occurred at a power press which was unguarded, the occupier stating that he did not know of a suitable guard for the particular die being used at the time. As soon as he received a summons to attend the court he sent to the makers of the press and had a suitable guard installed at once, clearly showing neglect on his part in failing to provide a guard before the accident happened.

Fire Escapes.—I have paid particular attention to this matter, as in the city part of my district very many of the factories are situated above the first floor, and alternate means of escape must be provided under such circumstances.

Certificates of Fitness.—So far as my district is concerned this requirement is fairly well observed by employers generally, but in a few cases it has been necessary to remind occupiers of their obligations in this matter.

Bakehouses.—The standard of cleanliness required in all bakehouses has been well maintained in most cases, and, where necessary, orders have been given to limewash.

Mr. Inspector Lynch reports :—

For the greater part of the year under review I have been in charge of the district including Chippendale, Redfern, Erskineville, and Alexandria. The operations during the year have evidenced a very rapid increase in the number and importance of factories.

Registrations.—Within the area a large number of new factories were registered, including two employing over 500 hands each.

Sanitation.—Special attention has been paid to the sanitary condition of factories within the area. Several factories have been remodelled to conform with modern ideas of sanitation.

Fire Escape.—All factories within the district comply with the regulations in regard to means of escape in case of fire. In the new factories erected during the year up-to-date fire escapes were provided.

Overtime.—The regulations regarding overtime were well observed.

Certificate of Fitness.—Little trouble was given by employers in regard to the employment of uncertificated juvenile labour.

Bakehouses.—No new bakehouses were erected during the year, but one was remodelled, and one other is at present being remodelled and enlarged in order to meet the requirements of the Act.

General.—Much activity has been shown during the year, and a number of new industries has been launched, including the manufacture of wooden heels for boots, clothes pegs, extraction of oil from waste materials, and others. At present more than a dozen new factories are under construction, and I have been advised by other manufacturers of their intention to build during the coming year. Work in the iron trades has not been brisk during the latter part of the year, but in the boot trade a very busy time has been experienced, and several Melbourne firms have established factories in the district.

Mr. Inspector Ogilvie, reports :—

Registrations.—A large number of factories was registered during the year, including engineering works, woollen mills, and confectionery works.

Structural Alterations.—In order to meet with the expansion of trade, structural alterations were carried out in a number of factories.

Sanitation.—Whilst inspecting a large engineering works I found that twelve W.C.s. (pan system) were installed within the building but were not partitioned off as required. Remedial instructions were served and the work was carried out forthwith.

Fencing of Machinery.—Careful attention was given to the requirements of the Act in this direction. On my visits to the factories I found, with few exceptions, that the Act was being observed in a satisfactory manner.

Fire Escapes.—Whilst inspecting a building in which was registered a number of factories I found obstructions on the first, second, and third landings of the fire escape. One landing was used as a kitchen, one as a dark room for photographic purposes, and the other as a store room. If a fire had broken out the fire escape would have been useless. Proceedings were taken against three occupiers for obstructing the fire escape, and convictions obtained.

Accidents.—One fatal accident occured during the year. Whilst a circular saw (Canadian) was in motion a sawyer attempted to pull an obstruction from the back of the saw. In leaning forward he slipped, with the result that his head came in contact with the bottom saw.

A number of accidents happened in which the persons injured lost parts of fingers. A male employee was working a jointer machine without a guard when his hand slipped and came in contact with the revolving cutter. Proceedings were successfully taken against the occupier for failing to fence the machine.

Bakehouses.—The bakehouses in my district were kept fairly clean, and only in a few cases were instructions to limewash the walls necessary.

Certificates of Fitness.—On several occasions I had to direct attention to section 45 of the Act. In two large factories I found boys working who were under the age of 14 years.

Mr.

Mr. Inspector Pickering reports :—

Registrations.—A large number of registrations and cancellations were dealt with in my district. Some of the new registrations were in connection with entirely new industries in this State. Some of the new registrations have been granted to occupiers in existing factory premises, and sometimes this is beneficial, as it gives an Inspector the opportunity of having a factory brought up to the best conditions to conform with the Act, as alterations must necessarily take place to suit the business to be carried on.

Structural Alterations.—A few alterations have been made in my district it being usually necessary to enlarge existing premises. The provision of fire escapes has made structural alterations necessary in some instances.

Sanitation.—The sanitary conditions were, on the whole, satisfactory. Limewashing has in many cases to be enforced by instruction. The elimination of dust, especially in the polishing department of electroplating works, has had my special attention, and it has been found necessary to enforce the installation of exhaust systems to get rid of dust, &c. Occupiers generally look to the efficient ventilation of their factories.

Guarding of Machinery.—As usual, great attention has been paid to this matter. The safe working of the hydro extractor, particularly in laundries, has made rapid progress, and several safety devices have been constructed for these machines and have been found to be satisfactory. The guarding of the power press has also advanced in a satisfactory direction, and there should be no difficulty in guarding these dangerous machines regardless of the work being done on them. The new type of power press lends itself to more efficient safeguarding.

Fire Escapes.—Erections of fire escapes have been few in my district. I have had occasion to warn occupiers not to allow obstructions to be placed in the exits to escapes which would hinder employees from an easy exit in case of fire.

Accidents.—Several accidents have happened which required careful investigation. The circular saw, jointer, shaper, and power press still claim most victims. The loss of not more than two fingers has been the most serious that I have had to deal with. No fatal accidents have occurred during the year in my district.

Bakehouses.—Special attention has been given to the cleanliness of bakehouses. I found that occupiers, generally, considered it necessary to keep their bakehouses and adjacent rooms well limewashed or painted. The matter of ventilation for this particular class of factory has had my attention.

Certificates of Fitness.—Very few cases of persons under 16 years of age working without certificates came under my notice.

General.—The factories generally have not been working to their full extent, several large factories having to reduce their staffs considerably.

Senior Inspector Miss Golding, reports :—

Registrations.—During the year a large number of factories were registered in my district, and mostly on a large scale ; the principal ones were in the boot and leather industries. A small factory for the manufacture of rubber toy ballons was registered. The premises were not up to regulations, but notices were served on the occupier to bring the factory up to the required standard.

Structural.—There appeared a great desire on the part of the occupiers of old-style factories to improve them, and in many instances improvements were made by occupiers before the Inspectors' visit. In an old established factory a number of women were employed in an old building at core and conduit making. Instructions were given *re* floors, walls, roof, and sanitary matters, and these instructions were carried out.

Sanitation.—There is a general improvement in sanitary matters ; all new buildings are well fitted up, while many old ones have been much improved, but there were several bad cases where action was necessitated. In several restaurants conditions were found to be very bad, and in one case legal proceedings resulted in a fine of £10.

Overtime.—Proceedings were instituted against the occupier of a large factory in which overtime was worked five and six times in succession. Up to five and a half hours was so worked.

Certificates of Fitness.—In cases where breaches were detected warnings were sent. Most of these breaches were connected with children from England. In most factories now it is "no certificate, no work."

General.—This year the boot trade, dressmakers and milliners were kept busy, also the shirt-makers, &c.; flour-packing, and other lines were also busy.

Senior Inspector Miss J. G. Harriott, B.A., reports :—

Registration.—Four new factories were added to the register in the district under my charge during the past year. An additional building was erected in connection with a large tobacco factory. This is a fine, up-to-date structure, with every convenience for the workers.

Structural Alterations.—The heat in a laundry was considerably reduced by ventilation being provided in the roof directly over the calender. Extra ventilation and other structural alterations improved conditions in several lavatories. Additions to a felt hat factory, which were begun in the previous year, were not completed as expected, the reason given being the precarious state of business generally.

Sanitation.—The usual number of orders was given during the year in regard to general cleanliness and limewashing. A printing factory was found to be in a dilapidated and insanitary condition. When orders were left on the occupier to improve matters he decided to move to more suitable premises.

Overtime.—Comparatively little overtime was worked by women during the year. No applications for permission to work extra overtime were received in respect of factories in my district.

Certificates

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Certificates of Fitness.—In a woollen mill several girls under 16 years of age were found working without having obtained certificates of fitness. On the whole, however, I find that employers are becoming more careful than was formerly the case in seeuring the necessary eertificates for young people under 16 years of age.

General.—Women workers were kept busy during the earlier part of the year; later there was some unemployment, but matters soon righted themselves, and at the end of the year good machinists especially were in demand in the clothing trades.

It is the custom in most warehouses not to allow employees on the premises during the luncheon hour. I found that this practice was operating harshly in the case of the younger employees in the millinery workroom of a warehouse, who could not afford to go to restaurants for their meal. In wet weather especially great inconvenience was suffered. Satisfactory arrangements have now been made. In another warehouse a good dining-room has been provided for the use of the women employees.

Inspector Miss Brown reports:—

Registrations.—A large number of registrations was dealt with, mostly re-registrations of premises previously occupied as factories, but some were new buildings, notably a large up-to-date confectionery factory, replete with all requirements, and a woollen mills, which started in a small way, but has since had additions and alterations absolutely transforming it. Occupiers seem increasingly anxious when building new factories or altering old ones to obtain the advice of Inspectors in advance, thus ensuring compliance with the Act.

Structural Alterations.—I found it necessary in some cases to require minor alterations and improvements, and in one woollen mill, at my instance, a very commodious dressing room, replete with lockers. &c., for each female employee, was provided. A good dining and dressing room combined accommodation was also secured in a biscuit factory. In new arcade buildings in Pitt-street, in which several registrations have been effected, the construction, lighting and air-space show that care and attention have been given to provide satisfactory conditions.

Sanitation.—Although it was found necessary to serve some orders for cleaning, especially windows (which in some factories are sadly neglected) generally speaking, fair conditions were maintained. One notable exception, a suburban knitting factory, was found to be in a dirty and unsatisfactory state on several floors. Action was taken which resulted in a fine of £10 and costs. The magistrate commented to the effect that apparently this company had deliberately neglected its obligations under the Act, and also disregarded the health and wellbeing of its employees. In the new buildings erected, or those in which additions or alterations have been effected, there is a decided move to provide better conditions to ensure the comfort of those employed.

Overtime.—The working of overtime has been somewhat intermittent, and less than in previous years, as a whole. Where worked, the provisions governing same were fairly well carried out. In a few instances applications for extension of overtime, on adequate necessity being shown, were granted by the Minister.

Laundries.—In this industry conditions have been fairly satisfactory, regular cleansing, &c. being carried out, but in a few cases I had to order the limewashing of interiors. These instructions were promptly carried out

General.—All industries covering women's work showed fairly increased activities during the year, particularly knitting, dressmaking, millinery, leather-bag making, and ready-to-wear tailoring, &c. In an increasing number of factories much more forethought and attention is being given to the general welfare and comfort of employees. In one, recently visited, I found that the latest provision, paid for wholly by the firm for all concerned—male and female—was free medical and dental advice, which could be obtained on certain days during working hours.

I consider the general standard of factory life is decidedly on the up-grade, and has materially improved in the last few years.

Inspector Miss Grace L. Scobie, O.B.E., reports:—

Registrations.—During the year some very substantial factory buildings were erected within the area allotted to me, but the majority of registrations was occasioned by change of occupier only.

Structural Conditions.—Extensive structural alterations were carried out in three large factories, resulting in complete transformation of the original buildings. In one reconstructed building no provision had been made for ventilation, greatly to the discomfort of the employees generally. The defect was subsequently rectified.

Sanitation.—The standard in this direction was fairly well maintained. In districts not connected with the sewerage system there is a greater necessity for vigilance.

Overtime.—Very little excess overtime was worked in the area under my supervision—in fact, during the early months of 1921 I found a good deal of unemployment among women.

Certificates.—In view of the number of juveniles engaged in industry it is gratifying to note that only very occasionally one encounters the employer who has neglected to secure these certificates before engaging juveniles.

General.—In reviewing the year's work, the only outstanding feature of serious concern was, in my opinion, the unemployment among women during the early months of the year, due mainly to varying wage conditions, in conjunction with the unsettled state of industry.

Inspector Miss Stuart-Robertson reports:—

Structional Conditions.—The structural conditions are unsatisfactory in a number of the factories in the district over which I have had supervision during 1921, and may be said to be due to the buildings being old, and not being built for the purpose for which they are now used. Many of the occupiers have made internal improvements, which were costly beyond advantages given, as the buildings require remodelling.

Registrations.

Registrations.—The majority of registrations made during the year were for small factories for the making of clothing.

Sanitation.—The general sanitation of factories is about up to the usual standard, and requires constant supervision. A good deal of the unsatisfactory condition is due to faulty construction.

Overtime.—A fair amount of overtime was worked, and extensions were granted to five firms in my district to enable them to complete contracts.

Certificates of Fitness.—The provisions of the Act in regard to the obtaining of medical certificates for young persons are fairly well observed.

General.—Employment in women's clothing factories has been well maintained. Goods of a very high class are being manufactured, the finishing being particularly well done, being mostly carried out in embroidery and beading. A good deal of fine handwork is necessary, and consequently a high price is charged for the making. The knitting trade is making a brave stand to maintain its position. The fall in the price of wool has hit some of those who had previously bought stocks at a high price. Hosiery manufacturing is booming, and will, no doubt, become one of our principal industries.

Newcastle.

Senior Inspector Huntley, Officer-in-Charge, Newcastle, reports :—

The customary change of districts was made early in January, 1921, and I took over the charge of the Factories District embracing the North Coast, as far north as Port Macquarie, and including a City and Suburban area. During the year, with exceptions owing to bad roads, I was able to visit the factories in my district at least twice, and most of those in the City and Suburban area, upon more frequent occasions. The motor car now available for the use of Inspectors at this office has proved a valuable adjunct and has permitted of road journeys connecting out-points of the district, at a very much smaller cost than would have resulted had vehicles been hired for such purpose. The time saved by means of the car must, during the year, have amounted to a lengthy period, with corresponding money value. I found a ready disposition on the part of factory occupiers to comply with the law, and recognising the difficulties of such occupiers in remote places, to gain satisfactory information, I applied myself vigorously to spreading a general knowledge of the requirements of the Department. In country sawmills it is possible to get the employer and employees together, and I have found a very great deal of good to come out of such conferences. Co-operation is a very necessary factor in our work, and when effectively gained, has a very high value.

Registrations.—Many new registrations were effected, and owing to changes in occupancy, a number of re-registrations was also made. The opportunity provided when application is made for the registration of premises under the Act, allows for special attention being paid and every modern advance being insisted upon. With the exception of some small premises in country areas, and a few old galvanised iron buildings in the City area, the standard now reached is a fairly satisfactory one.

Structural Conditions.—In my last report I referred to the tendency everywhere noticeable, towards modern buildings and plants. I find this desire still strongly in evidence, and new premises are springing up on all hands. Several of the old galvanised iron buildings have disappeared during the year, and their sites are now occupied by substantial brick buildings. The local architects are keen respecting the application of all modern ideas to new factory premises and a viewing of plans and consultations thereon is beneficial to all parties. The important matter of light receives first consideration and care is taken to advise that a satisfactory margin of air space is provided to allow of expansion in the number of employees.

Sanitation.—This important factor had my close and constant attention, and I found conditions generally satisfactory. The advantage of the sewerage system in the City and Suburban area is of course very great, and with reasonable co-operation on the part of the employees, there is no reason for any difficulty. In the country areas it was found necessary during the year to enliven the attention of the local Sanitary Inspectors. In a large northern town I found it necessary to have practically the whole of the sanitary conveniences brought under review, and a good many outhouses were condemned and instructions were given for the erection of new buildings.

Fencing.—This is probably the most important section of an Inspector's work, as danger to employees from unfenced machinery is always imminent. Generally speaking, I found the fencing and guarding of machinery in my area in a satisfactory condition, although it was necessary to have some of the wooden rails and standards replaced by iron. The standard of guarding is still on the upgrade, and I found more opposition from the employees than from the factory occupiers. This is particularly evident with respect to the guarding of circular saws.

The boiler regulations of the Act were carefully attended to and any failure to properly exhibit the satisfactory certificate, was reported.

Accidents.—There were very few accidents in my district during 1921, and I attribute this, as before, to regular inspectorial visits.

Fire Escapes.—The few fire escapes in my district have had special attention, and have always been found free of access to employees. The regulations regarding gas heaters have also had special attention, and every reasonable protection against fire instituted.

Overtime.—The overtime worked during the year was not in any sense abnormal, and the necessary notices were forwarded in proper order. Inspections of the overtime and tea money books proved that the Act was being carefully followed.

Certificates of Fitness.—In all, 450 certificates were issued by this office during 1921. Employers generally observe the Act and Regulations under this heading very well, although vigilance is exercised with respect to those industries carrying on continuous process. Boys are apt to give a wrong age in order to secure work, and occasionally a delinquent is discovered.

Bakehouses.—The standard with respect to bakehouses is still on the upgrade, and I had few instructions to give during the year. The inspections made by the officers administering Health and Pure Foods Act, coupled with the efforts of this Department, have undoubtedly established a standard of cleanliness in bakehouses which is very satisfactory, and which is well maintained.

Welfare Work.—There are evidences of improvements in this important direction, and there is every reason to believe that the factory occupiers in this district are determined to apply as much effort as possible towards the welfare activities of their employees. The welfare work spoken of in my last report is well maintained, and has been further developed.

Prosecutions.—It was found necessary during the year to prosecute two occupiers in my district, one for an unfenced fly wheel and the other for employing a boy under 16 years at a prohibited machine. Convictions were obtained and satisfactory penalties imposed.

General.—The large areas in this district requiring oversight render it difficult for an Inspector to pay as many visits as he would like, and the value of regular visitations is thereby considerably reduced.

Mr. Inspector Clark reports :—

Registrations.—Expansion has been shown in this direction, numbers of new factories having been added to the register, several of considerable size and importance.

Structural Conditions —The standard has been well maintained, new buildings erected during the year, particularly in the iron trade, show a considerable improvement in the type of building hitherto used for the carrying on of this important industry.

Fencing of Machinery.—Considerable attention has been given to this phase of factory legislation. New machine plants have been erected, existing machinery in other plants has been modernised and brought up to date, and in a greater number of industries machinery has and is displacing manual labour for production purposes. This expansion has called for increased vigilance in the safeguarding of dangerous machinery, but the work is being assisted by the manufacturers of machine tools, recognising the necessity of making provision for the covering of dangerous parts in the construction of the machine. The standard and type of guarding is on the improvement, and a more generous appreciation for co-operation in these matters has been displayed by all sections of the industrial community.

Accidents.—Numbers of accidents have been investigated, many of them only of a minor character. Of the serious ones, one terminated fatally. At the Newcastle Abattoirs a digester used for the boiling of blood was fitted with a door fastened by two clamps, held by threaded bolts. The door was used to eject the treated blood in a semi-solid substance on to the floor, after the water had been run off. A workman released one of the bolts for the purpose of opening the door, the pressure of the weight behind the door (some 5 or 6 cwt.) causing the thread of the other bolt to strip, with the result that the door came away, precipitating the whole mass of boiling substance on to the floor, severely scalding several workmen in the vicinity, one of whom subsequently succumbed to his injuries. The door and its fastenings were periodically examined, and it was not thought that there was any weakness in its design and construction.

Fire Escapes.—No new fire escapes have been erected during the year. The existing escapes have been given attention to see that the openings and approaches thereto are kept clear.

Overtime.—The overtime worked during the year has been limited and confined chiefly to the clothing trades ; the provisions of the section with respect to the reporting of such and the keeping of the records has been fairly well observed.

Certificates of Fitness.—In only a few instances were the provisions of the section disregarded, action being taken to remind occupiers who had been previously warned of their obligation in this respect.

Bakehouses.—The general conditions of bakehouses is fairly good, but in design and construction many antiquated structures still remain. Cleanliness and proper sanitary conditions are difficult to maintain in these instances, but time will eliminate many of the difficulties existing in this direction.

General.—Expansion of industry has again been a notable feature of the year, particularly in the iron and steel industry. The substitution of mechanical for hand power in an increasing number of industries has necessitated close attention and vigilance in the enforcement of the Act and Regulations, and experience has taught that results can only be achieved by regular and constant visitation.

Mr. Inspector Middlemiss, reports :—

The Inspectorial work in the section of the district allocated to me includes the supervision of several of the larger works in the Newcastle District.

Registrations.—A proportion of the new registrations effected during the year were re-registrations of premises previously occupied as factories. A new registration was that of an establishment for the production of plain and corrugated steel sheets.

Structural Conditions.—These are satisfactory generally. In regard to new factory buildings, it is now being generally appreciated that economic factory production, apart from statutory requirements, demands a high standard of hygienic conditions for the operations ; and such matters as ventilation, sanitation, natural and artificial lighting, and construction with a view to safety-positions for the mechanical installations, are given adequate consideration.

Air-conditioning, as understood in Europe and America, receives limited appreciation, but there is a growing understanding of its potentialities.

With regard to the older buildings occupied, the least desirable of these tend to eliminate themselves, and the application of the necessary regulations assist in gradually obtaining a higher standard.

Sanitation.—The conditions in the city portion of my district are, generally, satisfactory.

At the large factory premises, not connected with the Municipal Sewerage System, septic tanks have in several cases, been installed and given satisfaction.

In

In the country district, where no sewerage system exists, the conditions conform to the local ordinances, and are as satisfactory as possible. In some cases septic tanks are installed. I have, whenever possible, endeavoured to encourage an interest in this more hygienic method of sewerage treatment.

Guarding and Fencing.—I cannot refer to this subject without emphasizing what I consider the essential difficulties of dealing effectively with it. Mechanical appliances are undoubtedly in operation which are dangerous to the users. These are sold by the makers or their agents, without any responsibility as to their potential danger, and in many cases without efficient guards.

In my opinion, the necessary guards should be made as an integral part of the machine, and, so far as the guarding of the parts of the machine is concerned—the machine should comply with the required standard when sold to the user. If safety were considered by the machine designer, many dangers could be efficiently and more economically eliminated.

A further difficulty in dealing with this subject, is that a certain standard of guarding has been in many cases accepted, and it is at times difficult to make a machine user appreciate the justness of a demand requiring an improved higher standard. He is apt to look upon a guard or fence of any kind whatever as acceptable for all time.

In this district are several of the largest works engaged in the steel making, smelting, and the allied trades, where a large number of men are engaged in what are, under the most favourable conditions, dangerous occupations. I have sought, and to an extent obtained, co-operation with a view to obtaining a higher standard of danger safe-guards.

The conditions generally, in less hazardous occupations are reasonably satisfactory.

Accidents.—Unfortunately several fatal accidents occurred at one large works. In each case the facts showed that the accident was due to lack of effective co-ordination between operatives—actually that the men concerned were not sufficiently *en rapport* with each others actions.

Localised guarding is not always necessarily effective in such cases, something further is needed—the active personal responsibility of one worker to another.

At another works a man was killed by falling into a vat of hot varnish. He fell from the narrow ledge of the vat, where he was engaged in re-filling it. Rather than attempt to safeguard the position from which the refilling was done, I considered it necessary to give such instructions that a separate filling stand was constructed, connected by trough to the main vat, and at a safe distance from it.

Fire Escapes.—The few fire escapes in my district were found to be in a satisfactory condition.

Bakehouses.—I found the bakehouses in my district to be generally satisfactory. There is a decided opening for an improved material for wall coating, particularly when wooden walls and ceilings are in use.

Overtime.—The provisions of the Act were complied with in a fairly satisfactory manner. Not much overtime was worked but when it was, due notifications were forwarded.

Certificates of Fitness.—I have found that the large works give careful attention to requirements of the Act. No breaches came before my notice.

General.—The reflex of the world-wide chaotic industrial state of unrest is unfortunately being particularly severely felt in my district, where the iron and steel industry predominates.

North Coast District.

Mr. Inspector H. McEvoy reports :—

This district includes all towns on the North Coast from Port Macquarie to the border.

Registrations.—During the year 100 registrations and 80 cancellations were dealt with. The registrations comprised several new saw-mills, a large veneer (three-ply) manufacturing works, three new motor-engineering premises, and new up-to-date bakehouses.

Structural Conditions.—In a few instances structural alterations were ordered to be effected, and instructions were carried out without the necessity of issuing a special order. In one case, however, the owner of a bakehouse, which was in a very dilapidated condition, closed the bakehouse rather than incur the expense necessary to bring the premises into conformity with the Act.

Sanitation.—The sewerage system, unfortunately, is installed only in a few towns throughout my district. Nevertheless, conditions generally are fairly good. In one establishment, the conveniences for a number of females were so situated that it was necessary for them to pass through a room occupied by males only, and along a passage connecting the men's w.c.'s. Upon conversing with the occupier on the matter, I had no difficulty in persuading him to erect new conveniences in a suitable portion of the premises.

Fencing of Machinery.—Generally speaking, section 33 of the Act is fairly well complied with. Constant watchfulness, however, is necessary in respect to fencing. Proprietors, as a rule, are not averse to, or refuse to, provide guards, but some of the employees are lax in the use of them. One saw-miller, however, failed to guard the driving belt of a winch, and an employee lost his leg through neglect of guarding. The occupier also failed to report the accident. He was prosecuted, and defended his case, but was convicted, and fined for both breaches.

Accidents.—Considering the large number of saw-mills in my district, accidents were comparatively few. The most serious was that referred to in connection with fencing of machinery. Other accidents were of a minor character, and investigation disclosed that, in most instances, the accidents were the result of employees' thoughtlessness of, or indifference to, the danger surrounding their work.

Fire Escapes.—There is only one factory in my district covered by this section of the Act, the provisions being complied with.

Overtime.—Unfortunately, factory operations throughout the district have been "dull." I have no knowledge of any breaches of provisions of the Act in respect to overtime worked by employees.

Bakehouses.

Bakehouses.—Conditions of bakehouses generally are in conformity with the Act. In a few instances I had necessity to issue instructions to provide impervious floors, and instructions were carried out. As mentioned under the heading of structural alterations, one owner closed his premises rather than incur the expense of alterations.

Certificates of Fitness.—I found it necessary to issue instructions to a few occupiers to comply with section 45 of the Act.

North-western District.

Mr. Inspector Young (Tamworth), reports :—

This district includes all towns on the main railway line north and north-west of Werris Creek.

Registrations.—Registrations increased in the sawmilling, mostly in the Cypress pine areas; there were no new industries, usually a number of changes in ownership occur during a year, and these were attended to by me.

Sanitation.—The pan system is in operation throughout this district, and I found that occupiers generally keep their premises clean.

Fencing of Machinery.—Instructions were served upon many occupiers to provide guards to dangerous parts of machinery, and to constantly maintain existing guards.

Fire Escapes.—The only factories in which fire escapes were necessary were in flour mills, and these I found satisfactory.

Accidents.—At a furniture factory an accident happened to a youth by which he lost several fingers; late one evening an employee removed the guard from a planing machine to plane a wide board, next morning the youth, going to plane some short pieces, did not replace the guard thus leaving the cutters exposed with the above-mentioned result. One fatal accident happened at a fire-wood sawmill, caused by a horse stumbling and falling against the operator, who was thrown on to the saw.

Bakehouses—I found generally satisfactory.

Certificates of Fitness.—Instructions were issued to several occupiers to procure certificates for boys under 16, generally in cases where the occupiers had only recently started in business and were not aware of the provisions of the Act.

South Coast District.

Mr. Inspector Waugh (Wollongong), reports :—

This district includes all towns on the South Coast from Waterfall to Eden.

From January, 1921, the Labour Exchange Office in Wollongong was closed and my district was enlarged from the boundary of my old district at Brooman and Kiola Bay to Eden and Towamba.

Registrations and New Factories.—Very few factories have been registered this year. Two new factories at Port Kembla commenced operations, viz., an artificial manure works and a silica brickworks.

Sanitation.—Sanitary conditions are fairly good considering that no sewerage system is in existence and employers, as a rule, fall in with any suggestion offered.

Fencing Machinery.—I found no trouble with occupiers in respect to fencing and guarding of machinery where required.

Accidents.—A fairly large number of minor accidents occurred in the district during the year and two fatal accidents occurred. A man was placing a solution on a conveyor belt with the object of making the belt grip when by some means his sleeve caught between the belt and the pulley and he was thrown on to a moving gear wheel which was uncovered at the time of the accident. This gear wheel dragged the man round and jambed him against a fence. If the box, which had been provided to protect this part, had been put on the gear wheel before starting the machinery there is every reason to believe that, at the most, the man would have received an ordinary shaking. The employee died before it could be ascertained who removed the guard from the wheel.

Bakehouses.—Bakehouses, as a rule, are kept in a clean state, and where it was found necessary to give instructions the same were promptly carried out.

Certificates of Fitness.—In all industries where boys under 16 years of age are employed no trouble was experienced in respect to certificates of fitness.

South-Western District.

Mr. Inspector Wallace (Goulburn) reports :—

This district includes all towns on the Main Southern Line from Picton to Harden, and all towns on the Goulburn to Bombala line. I took up duty in this district in the latter half of the year, upon transfer from the metropolis.

Registrations.—In both the Metropolitan and Goulburn districts a large number of registrations were dealt with, and a corresponding number of cancellations. A number of occupiers neglected to make application to register their factories, and in most cases it was necessary to serve notices upon them to do so.

Structural Alterations.—It has been necessary to issue several notices to effect structural alterations and improvements in both districts. In one instance a notice was served upon the occupier of a perambulator-making factory to provide new lavatory accommodation for both sexes. In a few cases only it has been found necessary to apply for a Minister's order requiring the owner to carry out improvements. I have carried out the greater part of the work by personal interviews and drawing the attention of the occupier or owner to the necessity for carrying out structural alterations, with good results.

Sanitation.—Particular attention has been given to the sanitary provisions of the Act in the inspection of factories. In Goulburn most of the factories have been connected to the new sewerage system and a few of the factories are in process of having the system installed. This system gives the opportunity for enforcing the provisions relating to proper lavatory accommodation for both sexes. When visiting towns where the sanitary pan system is in operation, I endeavour to urge the advantage of providing a proper septic tank, where possible, where a number of employees are engaged.

Fencing

Fencing Machinery.—The provisions of the Act in this direction have been enforced throughout the district, and occupiers have been urged to discard the obsolete type of fencing and erect the more efficient type. A large number of notices were issued, requiring machinery to be securely fenced, and, at the extreme danger points, to be fenced with panels of woven wire. On making a second visit to some of the factories, it is a pleasure to note how well the work has been carried out.

In one case, proceedings were instituted against a saw-mill proprietor for failing to securely fence a circular saw which was in a dangerous condition. A substantial penalty was imposed.

Accidents.—During my term in the metropolitan district, I inquired into a number of reported accidents. Most of these were in furniture factories on circular saws and jointers.

Overtime.—In my area towards the end of the year, owing to slackness of trade, there appeared to be no need for working extra time.

Certificates of Fitness.—It was necessary in only a few cases to enforce the provisions *re* obtaining certificates of fitness.

Fire Escapes.—When inspecting in the metropolitan area, I attended to several fire escape matters, and in some cases structural improvements were effected.

Bakehouses.—A great improvement has been effected in several bakehouses, but a fair number require to be brought up to the standard of the Act.

General.—I have to report that most of the refrigerating and rabbit freezing works throughout the Goulburn district have closed down, the principal cause being through the depression in the rabbit industry owing to the diminished export and local trade. Towards the end of the year several sawmills were affected through the slackness in the demand for hardwood.

Southern District.

Mr. Inspector Durack (Wagga Wagga), reports :—

This district includes all towns on the main Southern line and branches south of Murrumburrah.

Registrations.—A large number of registrations has been effected in my district during the year, most of these being in respect of old premises, and, with the exception of one bakehouse in the Oakland district, no new buildings were erected for factory purposes.

Sanitation.—With the exception of the two leading towns, Albury and Wagga Wagga, there is no sewerage system in the district. Consequently, I found, in many instances, that the lavatory accommodation was not up to the standard of cleanliness that exists in towns where a sewerage system is installed. However, the conditions as a whole were fairly good, and where deficiencies were pointed out no difficulty was experienced in having the matters remedied.

Fencing and Guarding of Machinery.—Taking the district as a whole, there has been an honest attempt made by occupiers of factories to keep their machinery effectively fenced and guarded, but an exception must be made in this respect of the owners of sawmills. I found, with very few exceptions, that the persons in charge of these mills took little or no interest in the welfare of the employees in this industry, and even when instructions were given for the proper guarding of the machines and illustrations of guards provided for the benefit of the occupiers, they were most reluctant in procuring the safeguards necessary, and it was not until the liability they were running in overlooking this aspect of their responsibilities was impressed upon them that guards were procured and fences erected.

Accidents.—Very few accidents have occurred in my district during 1921. Considering I have not been able to visit these factories more than once in six months, occupiers of factories have been alive to this part of their duties, and kept their machinery in such an efficient manner that no accident of any serious nature has happened throughout the district during the last twelve months.

Fire Escapes.—This part of my work took up very little time, as there are very few factories in the area where there is a second floor.

Overtime.—There has been little or no overtime worked in the district during the year.

Bakehouses.—This part of the Act has had my careful attention. I have, with two exceptions, found all premises in a cleanly condition, and periodically limewashed. In the two bakehouses mentioned I had to administer a warning in connection with floors and windows, but my instructions were carried out forthwith. It can be safely said that the bread of the people in this district is prepared in cleanly surroundings.

Western District.

Mr. Inspector Baker (Orange), reports :—

This district includes all towns on the main Western line beyond Perthville.

During the year I was able to carry out general inspections over the whole district, and visited many of the principal centres twice. The district is an extensive one, and the work done therein was made possible only by the use of the Departmental motor car.

Registrations.—I found several unregistered factories and others that had changed hands since being registered. Notwithstanding the fact that in several industries trade conditions were not good, the number of factories in the district increased, and new industries were started. There appeared, however, to be a considerable reduction in the number of hands employed in the coachbuilding and general blacksmithing trades.

The acute shortage of essential building materials, particularly cement, proved a great obstacle to the carrying through of repair work and alterations during the year.

Sanitation.—The only sewered town in the district is Orange, pan closets being used in most of the others. There are, however, towns in which cesspits are used, one example being Trangie, where the water supply is obtained from wells within a few feet of the pits. It would, in my opinion, be unreasonable to insist on factory occupiers in such towns only installing a proper sanitary system, as such could not be successfully

successfully maintained unless undertaken by a properly constituted local governing body. In one of the large towns, in a recently erected block of buildings (portion only of which was used as a factory) several pan closets opened directly into the building. Those of the factory (2) were, however, outside, but very close to a workroom door. The air in the workroom was contaminated and the matter was brought under the notice of the Board of Health as it was thought that the Board and the local authorities could best deal with it.

Notices were served on a number of occupiers to paint or limewash the walls and ceilings of their factories, and where it appeared that the ventilation of a workroom was not satisfactory, instructions were given to provide suitable ventilators. Heating appliances in workrooms were fitted with hoods and flues for the purpose of carrying the fumes out of the buildings. No case of over-crowded workrooms came under my notice.

Fencing of Machinery.—Considerable improvement was effected in the fencing and guarding of machinery and mill-gearing during the year. The work was greatly assisted by the distribution of "photo.-prints" of approved guards now supplied by the Department. My experience in regard to fencing of machinery is that, although the exact requirements of the Act have been explained to the occupier and he appears to have grasped exactly what is required, when the plant is next inspected, the fencing is found to be inefficient.

In addition to the fencing and guarding of machinery, a matter of no less importance is mechanical means of control at engines, mill-gearing, and machines. In many of the country towns, internal combustion engines are largely used in factories. In the majority of instances these are put in by the agents without any provision being made for the mechanical control of the shafting to which they are connected. If the control (usually a loose pulley and striking gear) is supplied with the engine, the additional cost is negligible, but when fitted afterwards its cost is considerably advanced.

Boiler Inspection.—Occupiers of factories using steam boilers or other pressure vessels without a certificate for same were instructed to have them inspected by an approved Boiler Inspector and to exhibit the certificates in accordance with the Regulations.

Accidents.—Very few accidents were reported during the year.

Fire Escapes.—With the exception of flour mills and a brewery, there are no factories in the district where operations are carried on above the first floor. Alternate means of escape are provided at the flour mills. There is no special provision made at the brewery, but, at the same time, it is only occasionally that an employee has reason to ascend to the room above the first floor.

Certificates of Fitness.—Several occupiers were warned for employing youths under 16 years of age in factories. One lad working in a bakehouse when examined by the doctor was refused a certificate on account of serious heart trouble. He has since obtained light employment.

Overtime Restrictions.—The trades to which the overtime provisions of the Act particularly apply were not busy during the year in my district, and no applications were made for an extension of overtime.

Mr. Inspector Nolan reports :—

Registrations.—No large factories were registered during the year, and new registration chiefly applied to factories where changes of ownership had taken place.

Structural Alterations.—With the object of meeting increased demands the occupiers of several large factories enlarged their plants. This work, coupled with the completion of plans for the installation of more modern machinery, necessitated considerable structural alterations. In several small factories, where minor alterations were found to be necessary, I have found that excellent results can be secured by encouraging occupiers to co-operate with the inspector in planning ways and means of completing the necessary alterations.

Sanitation.—Only a small portion of my district has the sewerage system in operation. The services provided by Municipal and Shire authorities, and the supervision they exercise in areas where the pan system is in use minimises work under this heading, but I have found it necessary to issue a number of directions to occupiers to limewash and clean premises.

Fencing of Machinery.—This important section of the Act has received close attention, and a large number of directions were issued to securely fence dangerous machinery and maintain fencing. Occupiers are always willing to comply with directions to securely fence dangerous machinery—and mill gearing—where the machinery or mill gearing is of a large type, but they are apt to disregard their obligations so far as small machinery is concerned.

Accidents.—One fatal accident occurred through an elevator collapsing at a blast furnace. A runner-off was about to unload a truck from the elevator on to a gantry when the elevator collapsed and tilted to one side. The runner-off fell through the opening to the bottom of the lift well and was killed instantly. From evidence given at the coronial inquiry it is surmised that the accident was caused through the breaking of an upright which was suffering from fatigue. The jury returned a verdict of accidental death. Since the accident a trip-gear has been installed, and there is now no necessity for any person to board the lift during unloading operations. At a wool-washing establishment an employee climbed on to a drying machine to fix a sheet of galvanised iron to prevent rain-water from dripping on to the machine, and in doing so he leaned on to a revolving shaft which caught his clothes and whirled him around. Fortunately there was sufficient clearance above and below the shaft, and he escaped without serious injury. Generally speaking, the number of serious accidents showed a decrease on last year's figures.

Fire Escapes.—Only a small number of fire escapes are necessary, and they were found to be in a satisfactory condition.

Certificates

Certificates of Fitness.—The provisions of the Act with regard to matters under this heading appeared to be generally well observed.

Bakehouses.—Bakehouses generally were found to be in good order. Directions principally given were to limewash. One exception to the above was found in a district where mining operations had ceased and the population had greatly diminished. The bakehouse, like other buildings in the district, had been allowed to get in to a state of disrepair, and under ordinary circumstances should have been closed. It was apparent that a new bakehouse would not be erected owing to the smallness of the trade, and as the closing up of the bakehouse would have caused great inconvenience and expense to the small population, the occupier was directed to speedily effect certain alterations and repairs pending further consideration of the whole matter.

Broken Hill.

Mr. Inspector Henstock reports:—

This district includes the towns of Wilcannia and Wentworth.

During the year I have continued my duties as Factory Inspector in Broken Hill District, in conjunction with other duties.

Registrations.—Registrations have been mainly through changes of occupiers and the installation of machinery in butcher's smallgoods factories. With the improved industrial conditions, several industries have been restarted during the latter part of the year. No new industries have been established.

Structural Alterations.—Satisfactory alterations have been made in several premises, such as further improvements in bakehouses and extensive alterations to an ice and refrigerating plant, and the rebuilding of a soap factory.

Sanitation.—Sanitary conditions continue fairly satisfactory, but some of the premises require close attention to ensure removal of clippings and trade debris.

Fencing Machinery.—General observance of the requirements of the Act in this direction has been satisfactory, but there is a growing tendency to encroach on limited floor space when installing additional machinery, which gives an element of danger difficult to effectively guard against.

Accidents.—Several accidents were reported during the year, the most serious being in a butcher's smallgoods factory. An employee endeavoured to replace a 2-inch belt on a pulley in motion, which resulted in his being caught in the pulley and dragged round the shafting. The prompt assistance of another employee probably prevented a fatality. He suffered the loss of one arm and other severe injuries. A serious accident also happened at a firewood cutting yard. An employee was reaching across the front of a large circular saw whilst it was in motion, and his arm came into contact, severing his hand at the wrist. Another accident occurred in a mincing machine at a bakehouse. The employee was pressing down material with his hand, instead of using a wooden "dolly" provided, and his hand was caught in the cutters. The result was that four fingers were taken off.

Bakehouses.—Improvements continue to be made in the ventilation and floors of factories. Two new premises have been constructed on much improved conditions.

Certificates of Fitness.—Obligations under the sections of the Act requiring the provision of certificates of fitness have been generally complied with.

General.—Instructions have been given to all occupiers with regard to the boiler regulations, and these instructions have been generally carried out. During the year periodical visits were made to outside districts, including the towns of Wilcannia, Menindie, and Wentworth.

Appendix I.

Persons employed, by Class of Factory, Classified by Industry—1921.

THE STATE.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Aged 16 years and under.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 1.—TREATING RAW MATERIAL, THE PRODUCT OF PASTORAL PURSUITS.												
(*a*) *Animal Products.*												
Boiling-down and tallow-refining ...	11	18	.....	18	.....	20	.....	192	.....	248	.....	248
Glue	4	1	5	4	11	4	8	109	2	118	26	144
Tanning	74	20	.....	29	.....	54	.....	904	.....	1,007	.....	1,007
Wool-scouring and fellmongering ...	38	5	.....	34	.....	53	.....	855	.....	947	.....	947
Other animal products...	7	10	.....	17	.....	4	.....	62	.....	93	.....	93
Total	134	54	5	102	11	135	8	2,122	2	2,413	26	2,439
(*b*) *Vegetable Products.*												
Chaff-cutting	115	1	.....	11	.....	11	.....	271	.....	294	.....	294
Total, Class 1...	249	55	5	113	11	146	8	2,393	2	2,707	26	2,733
CLASS 2.—OILS AND FATS—ANIMAL AND VEGETABLE.												
Oil and grease	15	4	3	8	4	12	.....	136	1	160	8	168
Soap, candles, &c.	25	24	54	52	74	91	64	465	102	632	294	926
Total, Class 2...	40	28	57	60	78	103	64	601	103	792	302	1,094
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.												
Asphalt	5	.....	.....	1	.....	3	.....	29	.....	33	.....	33
Bricks and tiles...	144	95	.....	122	.....	149	4	1,949	17	2,315	21	2,336
Glass and glass bottles	12	1	.....	95	.....	221	.....	876	.....	1,193	.....	1,193
Glass (ornamental)	27	15	.....	61	2	50	1	292	.....	418	3	421
Lime, plaster, and cement	14	5	.....	9	.....	5	.....	440	.....	459	.....	459
Marble and slate	12	1	.....	7	.....	11	.....	168	.....	187	.....	187
Modelling and fibrous plaster... ...	33	4	.....	27	.....	24	.....	178	.....	233	.....	233
Monumental masonry	29	2	.....	7	.....	5	.....	205	.....	219	.....	219
Pottery and earthenware	19	46	.....	47	2	66	1	545	23	704	26	730
Stone-dressing	52	8	.....	13	.....	12	.....	876	.....	909	.....	909
Other works	27	3	.....	7	.....	25	.....	380	.....	415	.....	415
Total, Class 3...	374	180	.....	396	4	571	6	5,938	40	7,085	50	7,135
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	1	.....	.....	.....	.....	.....	.....	4	.....	4	.....	4
Boxes and packing-cases	61	33	.....	83	.....	79	.....	529	.....	724	.....	724
Cooperage	12	10	.....	24	.....	23	.....	223	.....	280	.....	280
Joinery	273	47	.....	239	.....	250	.....	1,908	.....	2,444	.....	2,444
Saw-milling—Timber	483	40	.....	195	.....	288	.....	3,328	1	3,851	1	3,852
Firewood	188	2	.....	9	.....	7	.....	298	.....	316	.....	316
Wood-turning	16	4	.....	8	.....	5	1	40	.. ...	57	1	58
Other works	34	9	.....	17	.....	16	.....	173	.....	215	.....	215
Total, Class 4	1,068	145	.....	575	.....	668	1	6,503	1	7,891	2	7,893
CLASS 5.—METAL WORKS, MACHINERY, &c.												
Agricultural implements	19	11	.....	49	.....	40	.....	318	.....	418	.....	418
Brass and copper	68	47	8	111	4	105	2	776	2	1,039	16	1,055
Cutlery	24	3	.....	15	.....	16	.....	76	.....	119	.....	110
Engineering	330	128	.....	707	8	913	12	6,015	5	7,763	25	7,788
Galvanised iron	49	35	1	86	14	100	5	731	3	952	23	975
Iron works, foundries, & boilermaking	156	79	4	291	4	244	10	5,990	20	6,604	38	6,642
Iron safes and doors	4	.....	.....	11	.....	1	.....	44	.....	56	.....	56
Lead-mills	2	.....	.....	.....	.....	1	.....	18	.....	19	.....	19
Railway carriage works	5	9	... ..	51	.....	70	.....	392	2	522	2	524
Smelting and ore dressing	9	.....	.....	17	.....	32	.....	777	.....	826	.....	826
Stoves and ovens	21	6	.....	25	2	56	3	363	2	450	7	457
Tinsmithing	31	104	20	138	49	118	70	710	127	1,070	266	1,336
Wire-working	18	19	.....	144	.....	164	.....	822	.....	1,149	.....	1,149
Other metal works	85	71	2	99	13	112	2	688	1	970	18	988
Plumbing	35	9	.....	28	.....	33	.....	335	.....	405	.....	405
Farriery	33	2	.....	7	.....	7	.....	88	.....	104	.....	104
Total, Class 5...	889	523	35	1,779	94	2,012	104	18,143	162	22,457	395	22,852
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(*a*) *Animal Food.*												
Bacon	15	2	.....	1	.....	7	.....	146	.....	156	.....	156
Butchers' smallgoods	643	7	.....	23	.....	49	1	963	1	1,042	2	1,044
Margarine	3	1	.....	2	.....	21	.....	68	.....	92	.....	92
Meat-preserving	17	14	.....	24	.....	27	6	641	41	706	47	753
Total	678	24	.....	50	.....	104	7	1,818	42	1,996	49	2,045

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Person employed.										
		Aged 16 years and under.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 6.—CONNECTED WITH FOOD AND DRINK AND THE PREPARATION THEREOF—*continued.*												
(*b*) *Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.*												
Biscuits	11	201	146	103	173	56	217	253	238	613	774	1,387
Bread and pastry	1,226	62	...	224	12	289	33	2,613	117	3,188	162	3,350
Confectionery	166	56	144	78	273	76	407	492	268	702	1,092	1,794
Corn-flour and oatmeal	15	...	13	8	30	17	63	152	66	177	172	349
Flour-milling	62	6	.....	25	.....	47	.....	662	.....	740	.....	740
Jam and fruit preserving	29	11	10	14	30	44	27	209	139	278	206	484
Pickles, sauces, and vinegar	12	8	3	5	9	17	41	64	92	94	145	239
Poultry foods and dog biscuits ..	7	4	.....	2	.....	11	.....	158	2	175	2	177
Self-raising flour	4	1	2	3	10	3	25	8	7	15	44	59
Sugar-refining	4	2	.....	13	2	34	8	567	6	616	16	632
Total	1,536	351	318	475	539	594	821	5,178	935	6,598	2,613	9,211
(*c*) *Drinks and Stimulants.*												
Aerated waters and cordials	187	13	2	113	12	125	30	550	39	801	83	884
Brewing	18	1	.....	17	.....	45	.....	851	.....	914	.....	914
Condiments, coffee, spices, &c. ...	36	28	54	35	113	42	146	352	236	457	549	1,006
Distillery	3	...	.....	...	.....	...	.....	42	.....	42	.....	42
Ice and refrigerating	197	12	.....	28	.....	46	.....	842	.....	928	.....	928
Tea blending and packing	18	43	27	16	42	35	38	91	53	185	160	345
Wine, spirits, and beer bottling ...	58	6	.....	19	1	42	10	360	66	427	77	504
Total	517	103	83	228	168	335	224	3,088	394	3,754	869	4,623
(*d*) *Narcotics.*												
Tobacco, cigars, and cigarettes ...	16	51	119	89	224	111	383	611	601	862	1,327	2,189
Total, Class 6	2,747	529	520	842	931	1,144	1,435	10,695	1,972	13,210	4,858	18,068
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(*a*) *Textile.*												
Woollen mills	10	66	91	63	138	50	243	579	443	758	915	1,673
(*b*) *Dress.*												
Boots and shoes :—Order made ...	340	30	.....	43	1	62	1	673	17	808	19	827
Factory made ...	95	141	262	179	307	178	341	2,086	956	2,584	1,866	4,450
Clothing :—Men's slops	73	24	264	33	362	36	395	444	1,263	537	2,284	2,821
Women's slops	164	7	277	8	437	10	492	85	1,526	110	2,732	2,842
Tailoring	425	42	290	60	545	80	566	1,465	2,230	1,647	3,631	5,278
Corsets	12	1	55	3	92	8	103	11	205	23	455	478
Dressmaking and millinery :—												
Makers' material	149	4	367	2	652	3	732	34	1,520	43	3,271	3,314
Customers' material	185	1	116	...	143	...	159	2	392	3	810	813
Dye works	23	10	3	10	11	28	21	89	74	137	109	246
Furriery	17	7	3	6	15	9	24	26	52	48	94	142
Hats and caps	28	28	70	30	91	49	139	263	261	370	561	931
Hosiery and knitting	55	28	274	45	369	56	387	143	457	272	1,487	1,759
Jilskin and waterproof clothing ...	7	...	.....	...	5	1	4	10	16	11	25	36
Shirts, ties, and scarves	40	9	167	16	227	10	257	57	539	92	1,190	1,282
Umbrellas	5	1	17	6	15	3	12	20	48	30	92	122
Underclothing	70	2	128	5	161	2	230	21	514	30	1,033	1,063
Wigs and hair work	10	...	3	...	9	...	12	3	28	3	52	55
Total	1,698	335	2,296	446	3,442	535	3,875	5,432	10,098	6,748	19,711	26,459
(*c*) *Fibrous Materials and Textiles not elsewhere included.*												
Bags and sacks	8	9	15	20	35	12	57	87	84	128	191	319
Rope and twine...	10	31	7	94	10	44	9	108	8	277	34	311
Tents and tarpaulins	7	3	1	10	7	3	10	32	53	48	71	119
Total	25	43	23	124	52	59	76	227	145	453	296	749
Total, Class 7	1,733	444	2,410	633	3,632	644	4,194	6,238	10,686	7,959	20,922	28,881
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	16	2	2	4	4	17	6	52	18	75	30	105
Electrotyping and stereotyping, type founding, and printers' materials.	20	9	10	17	7	13	10	87	5	126	32	158
Paper bags and boxes	13	25	93	40	157	25	158	112	158	202	566	768
Paper mills, cardboard, and straw-board	6	9	13	21	28	13	33	255	42	298	116	414
Photo.-engraving, photo.-lithography, and photo. materials	59	16	28	21	45	21	72	154	167	212	312	524
Printing, bookbinding, and manufacturing stationery	467	301	165	453	305	414	373	3,726	721	4,894	1,564	6,458
Total, Class 8	581	362	311	556	546	503	652	4,386	1,111	5,807	2,620	8,427
CLASS 9.—MUSICAL INSTRUMENTS, &C.												
Pianos, organs, and sewing-machines..	23	8	.....	52	2	52	12	341	12	453	26	479
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	5	...	.....	2	.....	5	.....	9	1	16	1	17

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Aged 16 years and under.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY, HARNESS, &c.												
Coaches and waggons	256	57	.....	156	1	171	.....	1,157	.....	1,541	1	1,542
Cycles and motor cars	531	84	.....	325	3	424	1	2,071	15	2,904	19	2,923
Perambulators, &c.	6	9	1	16	1	18	.....	86	5	129	7	136
Saddlery, harness, &c....	59	24	3	30	4	42	11	378	27	474	45	519
Naves, spokes, &c.	12	1	.....	8	.....	25	.....	100	.....	134	.....	134
Whips	3	...	.....	3	.....	3	.....	12	.....	18	.....	18
Total, Class 11	867	175	4	538	9	683	12	3,804	47	5,200	72	5,272
CLASS 12.-SHIPBUILDING, FITTINGS, &C												
Docks and slips...	5	6	.....	69	.....	89	.....	1,017	.....	1,181	.....	1,181
Sailmaking	6	..	.....	3	1	1	2	34	10	38	13	51
Ship and boat building...	31	1	.....	37	.....	65	.....	635	.....	738	.....	738
Total, Class 12	42	7	.. ...	109	1	155	2	1,686	10	1,957	13	1,970
CLASS 13.—FURNITURE, BEDDING, &C.												
Bedding, flock, and upholstery ...	47	18	15	61	34	49	52	372	197	500	298	798
Carpet-sewing	5	...	2	1	2	...	5	40	39	41	48	89
Iron Bedsteads	3	8	.....	7	.....	8	.....	92	.....	115	.....	115
Billiard tables	1	2	.....	1	.....	1	.....	7	.....	11	.....	11
Chair-making	15	8	.....	21	.....	21	.....	112	.....	162	.....	162
Furniture and cabinet making—												
European	220	86	.....	338	1	287	.....	1,677	4	2,388	5	2,393
Chinese	43	1	.....	1	.....	3	.....	276	.....	281	.....	281
Bamboo and wicker	15	7	.....	14	.....	21	.. ...	135	.....	177	.....	177
Picture frames	25	3	1	14	11	11	8	64	28	92	48	140
Window blinds	7	7	2	4	2	7	1	71	8	89	13	102
Total, Class 13	381	140	20	462	50	408	66	2,846	276	3,856	412	4,268
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c. ...	17	9	32	13	60	10	70	55	38	87	200	287
Chemical works and drugs	61	36	59	42	119	50	107	380	196	508	481	989
Fertilisers	9	1	.....	5	.....	4	.....	61	.....	71	.....	71
Perfumes and essences...	19	12	18	22	48	13	47	42	28	89	141	230
Paints and varnishes	22	30	2	23	5	28	10	391	18	472	35	507
Other Minor Works	5	...	.....	5	3	2	8	50	4	57	15	72
Total, Class 14	133	88	111	110	235	107	242	979	284	1,284	872	2,156
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	21	4	6	8	6	14	8	48	9	74	29	103
Surgical instruments	5	2	.....	3	2	2	3	34	5	41	10	51
Other Minor Works	4	...	.....	2	.....	2	.....	5	.....	9	.....	9
Total, Class 15	30	6	6	13	8	18	11	87	34	124	39	163
CLASS 16.—TIMEPIECES, JEWELLERY, AND PLATEDWARE.												
Electroplating	34	11	1	27	2	20	3	203	4	261	10	271
Jewellery	80	20	8	50	14	77	20	411	33	558	75	633
Total, Class 16	114	31	9	77	16	97	23	614	37	819	85	90
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	79	30	.....	177	7	170	7	611	8	988	22	1,010
Electric light and power works* ...	305	5	.....	47	.....	38	.....	1,014	.....	1,104	.....	1,104
Gas works	39	6	.....	16	.....	25	.....	1,745	1	1,792	1	1,793
Lamps and gas mantles	7	1	2	4	32	7	41	48	42	60	117	177
Hydraulic power	3	...	.. ...	1	.....	...	.....	24	.....	25	.....	25
Coke works	14	5	.....	21	... ..	19	.....	596	.....	644	.....	644
Total, Class 17	447	47	2	269	39	259	48	4,038	51	4,613	140	4,753
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy leather	21	19	24	32	43	31	58	179	64	261	189	450
Leather belting	6	5	.....	6	.....	14	.....	36	.....	61	.....	61
Portmanteaux	11	29	9	55	20	41	24	205	32	330	85	415
Other Minor Works	23	12	8	13	31	15	34	70	38	110	111	221
Total, Class 18	61	65	41	106	94	101	116	490	134	762	385	1,147
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting...	8	2	.....	4	3	6	6	190	9	202	18	220
Brooms, brushes	27	20	6	27	16	33	11	140	32	220	65	285
Florists and seedsmen	10	1	9	4	7	1	9	23	10	29	35	64
Laundries—European†	158	4	42	5	147	6	330	190	1,046	205	1,565	1,770
Chinese	25	...	.....	1	1	...	2	39	10	40	13	53
Rubber goods	13	27	48	34	66	51	125	501	234	613	473	1,086
Toys	29	6	2	19	12	16	7	92	5	133	26	159
Painting and sign-writing	10	4	.....	17	.....	11	.....	168	.....	200	.....	200
Other Minor Works	23	6	27	20	52	25	38	134	33	185	150	335
Total, Class 19	303	70	134	131	304	149	528	1,477	1,379	1,827	2,345	4,172
Total, All Industries ...	10,087	2,903	3,665	6,823	6,054	7,825	7,524	71,268	16,322	88,819	33,565	122,384

* Including 239 electric lighting plants for picture shows employing 239 persons.

† Charitable institutions doing outside laundry work are included in the number of factories registered.

Appendix II.

Factories, by Number of Persons employed—1917-1921.

Year.	Number of Factories in which the number of persons employed is—																Total
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																	
1917	2,096	1,256	662	272	129	145	74	32	66	24	23	6	4	6	2	2	4,799
1918	2,044	1,349	688	304	146	130	92	40	70	33	20	9	4	7	4	2	4,942
1919	2,247	1,398	744	319	161	175	76	43	72	45	23	9	4	7	5	2	5,330
1920	2,640	1,452	752	335	169	178	99	54	70	33	27	10	4	7	8	4	5,842
1921	2,603	1,604	751	340	187	152	96	44	78	22	26	10	6	8	3	4	5,934
Newcastle District.																	
1917	486	189	77	22	10	11	2	1	4	1	1	...	...	1	...	1	806
1918	480	181	87	27	12	11	4	...	1	4	1	...	...	1	...	1	810
1919	492	202	103	26	13	10	3	3	6	2	4	...	1	...	...	1	866
1920	528	238	94	29	11	14	3	3	9	...	5	...	1	...	...	1	936
1921	598	258	89	29	11	12	7	...	3	3	2	3	1	...	...	1	1,017
Rest of State.																	
1917	1,719	555	160	35	7	7	1	3	3	...	2	...	2	...	...	...	2,494
1918	1,701	635	181	39	15	12	3	1	1	3	1	...	1	1	...	...	2,594
1919	1,909	638	175	48	17	8	1	3	1	3	1	2	..	1	...	...	2,807
1920	2,127	600	177	37	9	7	4	1	...	...	3	1	...	...	1	..	2,967
1921	2,195	707	170	25	18	7	3	1	4	2	..	2	1	1	...	...	2,136
State.																	
1917	4,301	2,000	899	329	146	163	77	36	73	25	26	6	6	7	2	3	8,099
1918	4,225	2,165	956	370	173	153	99	41	72	40	22	9	5	9	4	3	8,346
1919	4,648	2,238	1,022	393	191	193	80	49	79	50	28	11	5	8	5	3	9,003
1920	5,295	2,290	1,023	401	189	199	106	58	79	33	35	11	5	7	9	5	9,745
1921	5,396	2,569	1,010	394	216	171	106	45	85	27	28	15	8	9	3	5	10,087

Appendix III.

Factories, by Class and Number of Persons employed, 1921.

Class of Factory.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																	
I. Treating raw material, product of pastoral pursuits...	58	30	19	10	6	2	6	1	5	...	...	...	1	...	...	...	138
II. Oils and fats—animal, vegetable, &c ...	9	6	4	1	3	1	...	1	1	...	...	...	...	1	...	...	27
III. Processes relating to stone, clay, glass, &c.	65	50	47	30	20	8	7	2	2	1	3	...	...	1	...	...	236
IV. Working in wood	194	115	35	20	6	2	6	3	2	1	1	...	...	...	...	...	385
V. Metal works, machinery, &c.	260	187	92	40	20	23	16	10	16	3	2	...	...	2	...	1	672
VI. Connected with food and drink, &c. ..	746	209	85	34	12	21	16	2	8	3	2	4	...	3	2	1	1,148
VII. Clothing and textile fabrics, &c.... ...	504	408	214	81	63	44	24	16	24	7	11	4	4	1	...	...	1,405
VIII. Books, paper, printing, engraving, &c. ...	117	128	60	35	13	14	5	1	7	4	3	1	1	...	...	...	389
IX. Musical instruments, &c.	9	5	4	3	...	...	...	...	...	...	1	...	...	...	...	...	22
X. Arms and explosives	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XI. Vehicles and fittings, saddlery, harness, &c.	168	148	35	15	6	11	2	2	1	...	...	...	...	...	...	...	388
XII. Ship and boat building, &c.	13	6	2	4	1	...	4	...	2	...	...	...	...	..	...	1	33
XIII. Furniture, bedding, &c.	125	97	48	30	8	5	4	2	4	1	...	...	...	...	...	...	324
XIV. Drugs, chemicals, and by-products ..	43	39	20	4	8	5	2	1	1	...	1	1	...	...	...	...	125
XV. Surgical and other scientific instruments	17	6	2	1	1	...	...	...	...	...	...	...	..	...	...	...	27
XVI. Jewellery and plated-ware, &c.	53	31	11	3	6	2	...	...	...	...	...	...	...	...	...	...	106
XVII. Heat, light, and power	114	30	16	8	4	3	2	1	1	2	1	...	...	...	...	1	183
XVIII. Leatherware (excepting saddlery and harness)	13	24	11	5	2	3	...	1	1	...	1	...	...	...	...	...	61
XIX. Minor wares not elsewhere included ...	91	84	46	16	8	8	2	1	3	...	...	...	...	...	1	...	260
Total	2,603	1,604	751	340	187	152	96	44	78	22	26	10	6	8	3	4	5,934
Newcastle District.																	
I. Treating raw material, product of pastoral pursuits...	9	...	...	...	...	...	...	..	...	1	...	...	..	...	...	...	10
II. Oils and fats—animal, vegetable, &c. ...	...	3	1	...	...	...	...	...	...	1	...	...	...	...	...	...	5
III. Processes relating to stone, clay, glass, &c.	19	11	4	6	3	1	...	...	...	...	...	...	...	...	...	...	44
IV. Working in wood	88	61	27	9	...	4	1	...	...	...	...	...	...	...	...	...	190
V. Metal work, machinery, &c.	33	18	7	3	1	1	1	...	...	1	2	3	1	...	...	1	72
VI. Connected with food and drink, &c. ...	298	51	10	3	...	2	1	...	1	...	...	...	...	...	...	...	366
VII. Clothing and textile fabrics, &c.	24	45	18	2	2	2	3	...	2	...	...	...	...	...	...	...	98
VIII. Books, paper, printing, engraving, &c. ..	16	14	4	2	1	1	...	...	...	...	...	...	...	...	...	...	38
IX. Musical instruments, &c.	...	1	...	...	...	...	...	...	..	...	...	...	...	...	...	...	1
XI. Vehicles and fittings, saddlery, harness, &c.	45	30	5	1	..	...	...	...	...	...	...	...	...	...	...	..	81
XII. Ship and boat building, &c.	4	2	1	...	2	...	...	...	...	...	...	...	...	...	...	...	9
XIII. Furniture, bedding, &c.	10	9	5	1	...	1	...	...	...	...	...	...	...	...	...	...	26
XIV. Drugs, chemicals, and by-products ...	...	2	...	...	...	...	...	...	...	...	...	...	...	..	...	...	2
XV. Surgical and other scientific instruments	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
XVI. Jewellery and plated-ware, &c.	3	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XVII. Heat, light and power	40	6	4	1	1	...	1	...	...	...	...	...	...	...	...	...	53
XIX. Minor wares, n.e.i.	7	3	3	1	1	...	...	...	...	...	...	...	...	...	...	...	15
Total	598	258	89	29	11	12	7	...	3	3	2	3	1	...	...	1	1,017

Appendix III.—*continued.*

Class of Factory.	Number of Factories in which the number of persons employed is -															Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Rest of State.																
I. Treating raw material, product of pastoral pursuits	71	16	13	...	1	...	...	..	...	...	...	...	...	...	...	101
II. Oils and fats—animal, vegetable, &c.	5	3	...	...	...	...	...	...	...	...	...	...	...	...	...	8
III. Processes relating to stone, clay, glass, &c.	46	25	8	3	4	4	1	...	1	1	...	...	1	...	...	94
IV. Working in wood	301	125	61	2	3	1	...	...	...	...	..	...	...	...	...	493
V. Metal work, machinery, &c.	87	40	10	2	2	...	...	...	...	1	...	2	...	1	...	145
VI. Connected with food and drink, &c.	1,078	117	25	7	2	..	1	...	3	...	...	...	...	...	...	1,233
VII. Clothing and textile fabrics, &c	90	118	12	4	2	2	1	1	...	...	...	...	...	...	...	230
VIII. Books, paper, printing, engraving, &c.	82	60	11	1	...	...	...	...	...	...	...	...	...	...	...	154
XI. Vehicles and fittings, saddlery, harness, &c.	233	148	13	3	1	...	...	...	...	...	...	...	...	...	...	398
XIII. Furniture, bedding, &c.	16	13	2	...	...	...	...	...	...	...	...	...	...	...	...	31
XIV. Drugs, chemicals, and by-products	5	...	1	...	...	...	...	...	...	...	...	...	..	...	...	6
XV. Surgical and other scientific instruments	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XVI. Jewellery and plated-ware, &c.	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XVII. Heat, light and power	162	33	10	3	3	...	...	...	...	...	...	...	...	...	...	211
XIX. Minor wares, n.e.i.	16	8	4	...	...	...	...	...	...	...	..	...	..	...	...	28
Total	2,195	707	170	25	18	7	3	1	4	2	...	2	1	1	...	3,136
State.																
I. Treating raw materials, product of pastoral pursuits	138	46	32	10	7	2	6	1	5	1	...	...	1	...	...	249
II. Oils and fats—animal, vegetable, &c.	14	12	5	1	3	1	...	1	1	1	...	...	...	1	...	40
III. Processes in stone, clay, glass, &c.	130	86	59	39	27	13	8	2	3	2	3	...	1	1	...	374
IV. Working in wood	583	301	123	31	9	7	7	3	2	1	1	...	...	...	...	1,068
V. Metal works, machinery, &c.	380	245	109	45	23	24	17	10	16	5	4	5	1	3	...	2	889
VI. Connected with food and drink, &c.	2,122	377	120	44	14	23	18	2	12	3	2	4	...	3	2	1	2,747
VII. Clothing and textile fabrics, &c.	618	571	244	87	67	48	28	17	26	7	11	4	4	1	...	...	1,733
VIII. Books, paper, printing, and engraving, &c.	215	202	75	38	14	15	5	1	7	4	3	1	1	...	...	..	581
IX. Musical instruments, &c.	9	6	4	3	...	...	...	...	...	...	1	...	...	...	..	...	24
X. Arms and explosives	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XI. Vehicles and fittings, saddlery and harness, &c.	446	326	53	19	7	11	2	2	1	...	...	...	...	...	...	...	867
XII. Ship and boat building, &c.	17	8	3	4	3	...	4	...	2	...	...	...	..	...	...	1	42
XIII. Furniture, bedding, &c.	151	119	55	31	8	6	4	2	4	1	...	...	...	..	...	...	381
XIV. Drugs, chemicals, and by-products	48	41	21	4	8	5	2	1	1	...	1	1	...	...	...	...	133
XV. Surgical and other scientific instruments	20	6	2	1	1	...	...	...	...	...	...	...	...	...	...	...	30
XVI. Jewellery and plated-ware, &c.	58	34	11	3	6	2	...	...	...	...	...	...	...	...	...	...	114
XVII. Heat, light, and power	316	69	30	12	8	3	3	1	1	2	1	...	...	...	...	1	447
XVIII. Leatherware, n.e.i.	13	24	11	5	2	3	...	1	1	...	1	...	...	...	...	...	61
XIX. Minor wares, n.e.i.	114	95	53	17	9	8	2	1	3	...	...	...	...	...	1	...	303
Total	5,396	2,569	1,010	394	216	171	106	45	85	27	28	15	8	9	3	5	10,087

Appendix IV.

Persons employed, by Class of Factory, Classified by Industry—1921.

Metropolitan District.

Class of Factory.	Number of Factories on Register.	Persons employed.									
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Class 1.—Treating Raw Material, the Product of Pastoral Pursuits.												
(a) *Animal Products.*												
Boiling-down and tallow-refining	8	...	...	4	...	8	...	70	...	82	...	82
Glue	4	1	5	4	11	4	8	109	2	118	26	144
Tanning	67	19	...	26	...	47	...	844	...	936	...	936
Wool-scouring and fellmongering	20	5	...	32	...	49	...	756	...	842	...	842
Other animal products	5	10	...	17	...	4	...	55	...	86	...	86
Total	104	35	5	83	11	112	8	1,834	2	2,064	26	2,090
(b) *Vegetable Products.*												
Chaff-cutting	34	1	...	10	...	5	...	79	...	95	...	95
Total, Class 1	138	36	5	93	11	117	8	1,913	2	2,159	26	2,185
Class 2.—Oils and Fats—Animal and Vegetable.												
Oil and grease	13	4	3	8	4	10	...	124	1	146	8	154
Soap, candles, &c.	14	20	49	38	62	70	51	313	92	441	254	695
Total, Class 2	27	24	52	46	66	80	51	437	93	587	262	849

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.												
Asphalt	4	...	...	1	...	3	...	29	...	33	...	33
Bricks and tiles	70	88	...	101	...	103	4	1,388	17	1,680	21	1,701
Glass and glass bottles	12	1	...	95	...	221	...	876	...	1,193	...	1,193
Glass (ornamental)	26	15	...	59	2	49	1	290	...	413	3	416
Lime, plaster, and cement	5	3	...	7	...	...	...	83	...	93	...	93
Marble and slate	10	1	...	7	...	11	...	166	...	185	...	185
Modelling and fibrous plaster	27	3	...	20	...	21	...	153	...	197	...	197
Monumental masonry	22	...	...	5	...	2	...	172	...	179	...	179
Pottery and earthenware	14	45	...	43	2	61	1	484	23	633	26	659
Stone-dressing	25	...	...	3	...	6	...	231	...	240	...	240
Other works	21	1	...	7	...	23	...	283	...	314	...	314
Total, Class 3	236	157	...	348	4	500	6	4,155	40	5,160	50	5,210
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	1	...	.....	...	.....	...	.....	4	.....	4	.....	4
Boxes and packing-cases	50	30	.....	74	.....	72	.....	493	.....	669	.....	669
Cooperage	11	10	.....	21	.....	22	.....	212	.....	265	.....	265
Joinery	176	34	.....	149	.....	164	.....	1,408	.....	1,755	.....	1,755
Saw-milling—Timber	56	20	.....	109	... ..	115	.....	962	.....	1,206	.....	1,206
Firewood	52	2	... ..	3	.....	2	.....	124	.....	131	.....	131
Wood-turning	13	4	.....	8	.....	4	1	36	.....	52	1	53
Other works	26	8	.....	14	.....	15	.. ...	139	.....	176	.....	176
Total, Class 4	385	108	.....	378	.....	394	1	3,378	.....	4,258	1	4,259
CLASS 5.—METAL WORKS, MACHINERY, &c.												
Agricultural implements	11	8	.....	46	.....	33	.. ...	274	.....	361	.....	361
Brass and copper	64	28	8	73	4	87	2	533	2	721	16	737
Cutlery	24	3	.....	15	.....	16	.....	76	.....	110	.....	110
Engineering	237	88	.....	548	8	712	12	4,059	5	5,407	25	5,432
Galvanised iron	37	34	1	60	14	81	5	462	3	637	23	660
Iron works, foundries, and boiler-making	96	62	3	152	4	150	10	1,882	19	2,246	36	2,282
Iron safes and doors	4	...	.....	11	.....	1	.....	44	.....	56	.....	56
Lead-mills	2	...	.....	...	.....	1	.....	18	.....	19	.....	19
Railway carriage works	4	9	.....	51	.....	70	.....	382	2	512	2	514
Smelting and ore dressing	6	...	.....	1	.....	7	.....	105	.....	113	.... .	113
Stoves and ovens	21	6	.....	25	2	56	3	363	2	450	7	457
Tinsmithing	23	96	20	129	49	117	70	671	127	1,013	266	1,279
Wire-working	16	19	.....	86	.....	135	.....	587	.....	827	.....	827
Other metal works	81	71	2	96	13	110	2	680	1	957	18	975
Plumbing	19	2	.....	17	.....	22	.....	237	.....	278	.....	278
Farriery	27	2	.....	4	.....	5	.....	74	.....	85	.....	85
Total, Class 5	672	428	34	1,314	94	1,603	104	10,447	161	13,792	393	14,185
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(a) *Animal Food.*												
Bacon	8	...	.. ...	...	.....	5	.....	91	.....	96	.....	96
Butchers' small goods	311	6	.....	16	.....	33	1	559	1	614	2	616
Margarine	2	1	.....	2	.....	21	.....	65	.....	89	.....	89
Meat-preserving	6	14	.....	23	.....	24	3	552	41	613	44	657
Total	327	21	.....	41	.....	83	4	1,267	42	1,412	46	1,458
(b) *Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.*												
Biscuits	10	199	146	101	171	55	215	245	237	600	769	1,369
Bread and pastry	414	30	.....	108	10	168	29	1,366	96	1,672	135	1,807
Confectionery	134	48	130	71	260	74	394	448	258	641	1,042	1,683
Corn-flour and oatmeal	11	...	13	5	22	5	542	124	29	134	106	240
Flour-milling	19	3	.....	11	....	19	.....	311	.....	344	.....	344
Jam and fruit preserving	22	11	10	14	30	43	27	197	139	265	206	471
Pickles, sauces, and vinegar	9	7	3	5	9	17	41	61	92	90	145	235
Poultry foods and dog biscuits	7	4	.....	2	.....	11	.....	158	2	175	2	177
Self-raising flour	4	1	2	3	10	3	25	8	7	15	44	59
Sugar-refining	1	...	.....	4	2	21	8	312	6	337	16	353
Total	631	303	304	324	514	416	781	3,230	866	4,273	2,465	6,738
(c) *Drinks and Stimulants.*												
Aerated waters and cordials	28	2	1	51	11	74	27	215	33	342	72	414
Brewing	7	...	.. ...	9	.....	32	.....	721	.....	762	.....	762
Condiments, coffee, spices, &c.	32	24	43	28	98	40	139	343	234	435	514	949
Distillery	2	...	.....	...	.....	...	.....	41	.....	41	.....	41
Ice and refrigerating	60	3	.....	12	... ..	20	.. ...	438	.....	473	.....	473
Tea blending and packing	19	43	27	16	42	35	38	91	53	185	160	345
Wine, spirits, and beer bottling	27	3	. ...	15	1	39	10	273	65	330	76	406
Total	174	75	71	131	152	240	214	2,122	385	2,568	822	3,390
(d) *Narcotics.*												
Tobacco, cigars, and cigarettes	16	51	119	89	224	111	383	611	601	862	1,327	2,189
Total, Class 6	1,148	450	494	585	890	850	1,382	7,230	1,894	9,115	4,660	13,775

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(a) *Textile.*												
Woollen mills	9	66	84	61	130	50	230	558	438	735	882	1,617
(b) *Dress.*												
Boots and shoes—Order made ...	280	21	.....	27	1	48	1	538	16	634	18	652
Factory made ...	89	132	251	167	288	162	313	2,002	927	2,463	1,779	4,242
Clothing—Men's slops	70	24	205	32	285	32	328	430	1,199	518	2,017	2,535
Women's slops	157	7	265	8	423	10	470	83	1,504	108	2,662	2,770
Tailoring	248	33	241	40	395	48	389	950	1,803	1,071	2,828	3,899
Corsets	12	1	55	3	92	8	103	11	205	23	455	478
Dressmaking and millinery—												
Makers' material	120	4	341	2	600	3	662	34	1,418	43	3,021	3,064
Customers' material	152	...	100	...	111	...	124	...	327	...	662	662
Dye Works	19	9	2	10	8	26	18	81	72	126	100	226
Furriery	17	7	3	6	15	9	24	26	52	48	94	142
Hats and caps	28	28	70	30	91	49	139	263	261	370	561	931
Hosiery and knitting	53	27	268	43	362	54	376	142	451	266	1,457	1,723
Oilskin and waterproof clothing ...	7	...	.....	...	5	1	4	10	16	11	25	36
Shirts, ties, and scarves	39	9	153	15	212	10	235	55	527	89	1,127	1,216
Umbrellas	5	1	17	6	15	3	12	20	48	30	92	122
Underclothing	63	2	128	5	156	2	223	21	505	30	1,012	1,042
Wigs and hair work	9	...	3	...	8	...	11	3	26	3	48	51
Total	1,373	305	2,102	394	3,067	465	3,432	4,669	9,357	5,833	17,958	23,791
(c) *Fibrous Materials and Textiles not elsewhere included.*												
Bags and sacks	7	8	15	19	35	12	57	80	84	119	191	310
Rope and twine...	10	31	7	94	10	44	9	108	8	277	34	311
Tents and tarpaulins	6	3	1	10	7	3	10	29	53	45	71	116
Total	23	42	23	123	52	59	76	217	145	441	296	737
Total, Class 7 ...	1,405	413	2,209	578	3,249	574	3,738	5,444	9,940	7,009	19,136	26,145
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	16	2	2	4	4	17	6	52	18	75	30	10
Electrotyping and stereotyping, type founding, and printers' materials	20	9	10	17	7	13	10	87	5	126	32	15
Paper bags and boxes	12	25	91	40	156	24	157	111	158	200	562	76
Paper mills, cardboard, and straw-board	6	9	13	21	28	13	33	255	42	298	116	41
Photo-engraving, photo-lithography, and photo. materials	53	15	27	21	43	19	68	149	152	204	290	49
Printing, bookbinding, and manufacturing stationery	282	252	163	356	296	328	358	3,051	707	3,987	1,524	5,51
Total, Class 8 ...	389	312	306	459	534	414	632	3,705	1,082	4,890	2,554	7,44
CLASS 9.—MUSICAL INSTRUMENTS, &C.												
Pianos, organs, and sewing-machines	22	7	.....	51	2	51	12	337	12	446	26	47
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	5	..	.....	2	.....	5	.. ...	9	1	16	1	
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY HARNESS, &C.												
Coaches and waggons	81	15	.....	54	.. ...	76	.....	526	.....	671	.....	6
Cycles and motor cars	263	55	.....	236	3	308	1	1,473	14	2,072	18	2,0
Perambulators, &c.	6	9	1	16	1	18	.....	86	5	129	7	1
Saddlery, harness, &c.	32	17	3	19	3	25	8	267	26	328	40	3
Naves, spokes, &c.	4	...	.....	6	.....	21	.....	66	.....	93	.....	
Whips	2	...	.....	1	.....	3	.....	9	.....	13	.....	
Total, Class 11 ...	388	96	4	332	7	451	9	2,427	45	3,306	65	3,3
CLASS 12.—SHIPBUILDING FITTINGS, &C.												
Docks and slips	3	4	.....	68	.....	87	.....	989	.....	1,148	.....	1,1
Sailmaking	5	...	.....	3	1	1	2	32	10	36	13	
Ship and boat building	25	1	.....	35	.....	59	.....	577	.....	672	.....	6
Total, Class 12 ...	33	5	.....	106	1	147	2	1,598	10	1,856	13	1,8

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females	Total
CLASS 13.—FURNITURE, BEDDING, &c.												
Bedding, flock, and upholstery ...	39	16	15	58	34	49	51	345	195	468	295	763
Carpet-sewing	5	...	2	1	2	...	5	40	39	41	48	89
Iron bedsteads	3	8	.....	7	.....	8	.....	92	.....	115	.....	115
Billiard tables	1	2	.....	1	.....	1	.....	7	.....	11	.....	11
Chair-making	15	8	.....	21	.....	21	.....	112	.....	162	.....	162
Furniture and cabinet making—												
European	174	72	.....	302	1	238	.....	1,474	3	2,086	4	2,090
Chinese	42	1	.....	1	.....	3	.....	276	.....	281	.....	281
Bamboo and wicker	14	7	.....	14	.....	21	.....	132	.....	174	.. ...	174
Picture frames	25	3	1	14	11	11	8	64	28	92	48	140
Window blinds	6	7	2	3	2	7	1	69	8	86	13	99
Total, Class 13 ...	324	124	20	422	50	359	65	2,611	273	3,516	408	3,924
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c. ...	15	7	31	11	60	9	70	47	38	74	199	273
Chemical works and drugs	59	33	59	40	114	50	106	377	196	500	47	975
Fertilisers	7	1	.....	...	.....	...	.....	32	.....	33	.....	33
Perfumes and essences...	18	12	18	22	48	13	47	40	28	87	141	228
Paints and varnishes	21	30	2	23	5	28	10	388	18	469	35	504
Other minor works	5	...	.....	5	3	2	8	50	4	57	15	72
Total, Class 14 ..	125	83	110	101	230	102	241	934	284	1,220	865	2,085
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	18	3	6	7	6	14	7	43	9	67	28	95
Surgical instruments	5	2	.....	3	2	2	3	34	5	41	10	51
Other minor works	4	...	.....	2	.....	2	.....	5	.....	9	.....	9
Total, Class 15 ...	27	5	6	12	8	18	10	82	14	117	38	155
CLASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.												
Electroplating	31	10	1	27	2	20	3	189	4	246	10	256
Jewellery	75	19	8	47	14	73	20	391	33	530	75	605
Total, Class 16 ...	106	29	9	74	16	93	23	580	37	776	85	861
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	73	29	.....	158	7	161	7	438	8	786	22	808
Electric light and power works* ...	93	2	.....	33	.....	19	.....	628	.....	682	.....	682
Gas works	5	4	.....	15	.....	19	.....	1,455	.....	1,493	.....	1,493
Lamps and gas mantles	7	1	2	4	32	7	41	48	42	60	117	177
Hydraulic power	2	...	.....	1	.....	...	.....	20	.....	21	.....	21
Coke works	3	2	.....	3	.....	5	.....	88	.....	98	.....	98
Total, Class 17 ...	183	38	2	214	39	211	48	2,677	50	3,140	139	3,279
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy leather	21	19	24	32	43	31	58	179	64	261	189	450
Leather belting	6	5	.....	6	.....	14	.....	36	.....	61	.....	61
Portmanteaux	11	29	9	55	20	41	24	205	32	330	85	415
Other minor works	23	12	8	13	31	15	34	70	38	110	111	221
Total, Class 18 ...	61	65	41	106	94	101	116	490	134	762	385	1,147
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting...	8	2	.....	4	3	6	6	190	9	202	18	220
Brooms, brushes	22	19	6	26	16	32	11	128	32	205	65	270
Florists and seedsmen	8	1	9	4	7	1	9	23	10	29	35	64
Laundries—European†	137	4	41	2	110	5	290	170	985	181	1,426	1,607
Chinese	18	...	.....	1	1	...	2	30	9	31	12	43
Rubber goods	8	27	48	32	66	48	125	497	234	604	473	1,077
Toys	28	6	2	16	11	12	5	78	5	112	23	135
Painting and sign-writing	8	4	.....	15	.....	11	.....	146	.....	176	.....	176
Other minor works	23	6	27	20	52	25	38	134	33	185	150	335
Total, Class 19 ...	260	69	133	120	266	140	486	1,396	1,317	1,725	2,202	3,927
Total, All Industries ...	5,934	2,149	3,425	5,341	5,561	6,210	6,934	49,850	15,389	63,850	31,309	95,159

*These figures include 80 electric lighting plants for picture shows, employing 80 persons.
† Charitable institutions doing outside laundry work are now included in the number of factories registered.

Appendix V.

Persons employed, by Class of Factory—1917–21.

Class of Factory.	1917.	1918.	1919.	1920.	1921.
Metropolitan District.					
I. Treating raw material, product of pastoral pursuits	2,289	2,678	2,613	2,502	2,185
II. Oils and fats—animal, vegetable, &c.	713	667	835	.735	849
III. Processes relating to stone, clay, glass, &c.	3,789	4,414	5,250	6,724	5,210
IV. Working in wood	3,689	3,783	4,296	4,567	4,259
V. Metal works, machinery, &c.	8,302	9,830	11,818	14,856	14,185
VI. Connected with food and drink, &c.	12,122	13,516	14,915	14,397	13,775
VII. Clothing and textile fabrics, &c.	22,321	23,551	24,994	25,600	26,145
VIII. Books, paper, printing, engraving, &c.	6,356	6,813	6,840	7,252	7,444
IX. Musical instruments, &c.	446	428	496	563	472
X. Arms and explosives	18	21	33	30	17
XI. Vehicles and fittings, saddlery, harness, &c.	2,430	2,748	2,740	3,540	3,371
XII. Ship and boat building, &c.	1,828	2,135	2,180	2,968	1,869
XIII. Furniture, bedding, &c.	3,505	3,739	4,193	4,439	3,924
XIV. Drugs, chemicals, and by-products	1,546	1,807	2,013	2,173	2,085
XV. Surgical and other scientific instruments	152	166	143	146	155
XVI. Jewellery and plated-ware, &c.	631	765	837	975	861
XVII. Heat, light, and power	2,362	3,074	3,284	3,497	3,279
XVIII. Leatherware (excepting saddlery and harness)	719	965	1,238	1,079	1,147
XIX. Minor wares, n.e.i.	2,932	3,400	3,621	3,810	3,927
Total	76,150	84,500	92,339	99,853	95,159
Newcastle District.					
I. Treating raw material, product of pastoral pursuits	70	82	113	133	177
II. Oils and fats—animal, vegetable, &c.	243	209	203	175	219
III. Processes relating to stone, clay, glass, &c.	273	304	355	507	431
IV. Working in wood	939	998	1,364	1,424	1,396
V. Metal works, machinery, &c.	3,169	3,893	5,049	6,089	6,587
VI. Connected with food and drink, &c.	1,050	1,047	1,274	1,221	1,283
VII. Clothing and textile fabrics, &c.	939	1,006	1,085	1,209	1,269
VIII. Books, paper, printing, engraving, &c.	285	255	253	272	280
IX. Musical instruments, &c.	7	6	7	8	7
XI. Vehicles and fittings, saddlery, harness, &c.	243	288	289	377	354
XII. Ship and boat building, &c.	22	40	61	99	101
XIII. Furniture, bedding, &c.	153	155	181	205	218
XIV. Drugs, chemicals, and by-products	.....	.....	48	42	43
XV. Surgical and other scientific instruments	1	1	1	... ..	5
XVI. Jewellery and plated-ware, &c.	20	17	21	23	30
XVII. Heat, light and power	203	199	535	570	774
XIX. Minor wares, n.e.i.	135	142	159	157	130
Total	7,762	8,642	10,998	12,511	13,304
Rest of State.					
I. Treating raw material, product of pastoral pursuits	344	400	420	339	371
II. Oils and fats—animal, vegetable, &c.	26	21	18	19	26
III. Processes relating to stone, clay, glass, &c.	1,062	1,147	1,358	1,473	1,494
IV. Working in wood	1,386	1,767	1,946	2,216	2,238
V. Metal work, machinery, &c.	1,576	1,862	2,034	2,526	2,080
VI. Connected with food and drink, &c.	2,820	3,223	3,313	2,713	3,010
VII. Clothing and textile fabrics, &c.	1,379	1,424	1,510	1,408	1,467
VIII. Books, paper, printing, engraving, &c.	665	661	622	650	703
XI. Vehicles and fittings, saddlery, harness, &c.	1,294	1,465	1,461	1,399	1,547
XII. Ship and boat building, &c.	.....	.....	11	.....	.....
XIII. Furniture, bedding, &c.	72	73	89	120	126
XIV. Drugs, chemicals, and by-products	8	14	16	3	28
XV. Surgical and other scientific instruments	.....	.. ...	.....	1	3
XVI. Jewellery and plated ware, &c.	5	9	9	4	13
XVII. Heat, light and power	594	633	630	677	700
XIX. Minor wares, n.e.i.	108	124	131	142	115
Total	11,339	12,823	13,563	13,681	13,921
State.					
I. Treating raw material, product of pastoral pursuits	2,703	3,160	3,146	2,974	2,733
II. Oils and fats—animal, vegetable, &c.	982	897	1,056	929	1,094
III. Processes relating to stone, clay, glass, &c.	5,124	5,865	6,963	8,704	7,135
IV. Working in wood	6,014	6,548	7,606	8,207	7,893
V. Metal work, machinery, &c.	13,047	15,585	18,901	23,471	22,852
VI. Connected with food and drink, &c.	15,992	17,786	19,502	18,331	18,068
VII. Clothing and textile fabrics, &c.	24,639	25,981	27,589	28,217	28,881
VIII. Books, paper, printing, engraving, &c.	7,306	7,729	7,715	8,174	8,427
IX. Musical instruments, &c.	453	434	503	571	579
X. Arms and explosives	18	21	33	30	17
XI. Vehicles and fittings, saddlery, harness, &c.	3,967	4,501	4,490	5,307	5,272
XII. Ship and boat building, &c.	1,850	2,175	2,252	3,067	1,970
XIII. Furniture, bedding, &c	3,740	3,967	4,463	4,764	4,268
XIV. Drugs, chemicals, and by-products	1,554	1,821	2,077	2,218	2,156
XV. Surgical and other scientific instruments	153	167	144	.47	163
XVI. Jewellery and plated-ware, etc.	656	791	867	1,002	904
XVII. Heat, light, and power	3,159	3,906	4,449	4,744	4,753
XVIII. Leatherware (excepting saddlery and harness)	719	965	1,238	1,079	1,147
XIX. Minor wares, n.e.i.	3,175	3,666	3,911	4,109	4,172
Total	95,251	105,965	116,965	126,045	122,384

Appendix VI.

Persons employed, by Age Groups—1917-1921.

Metropolitan District.

Year.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		Over 21 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1916	4,814	1,892	2,463	3,709	4,346	4,178	6,045	37,599	13,795	47,378	26,649	74,027
1917	4,799	1,934	2,606	3,905	4,458	4,545	6,063	38,543	14,096	48,927	27,223	76,150
1918	4,942	2,092	2,795	4,339	4,559	4,755	6,395	44,169	15,396	55,355	29,145	84,500
1919	5,330	2,383	3,159	4,609	4,818	5,649	6,737	49,389	15,595	62,030	30,309	92,339
1920	5,842	2,456	3,392	5,201	5,086	6,459	6,948	54,467	15,844	68,583	31,270	99,853
1921	5,934	2,449	3,425	5,341	5,561	6,210	6,934	49,850	15,389	63,850	31,309	95,159
Newcastle District												
1917	806	201	95	444	247	491	279	5,605	400	6,741	1,021	7,762
1918	810	238	122	492	261	436	302	6,335	456	7,501	1,141	8,642
1919	866	259	152	630	250	569	309	8,400	429	9,858	1,140	10,998
1920	936	302	174	732	315	652	337	9,548	451	11,234	1,277	12,511
1921	1,017	194	170	734	323	754	351	10,307	471	11,989	1,315	13,304
Rest of State.												
1917	2,494	252	54	643	156	779	224	8,724	507	10,398	941	11,339
1918	2,594	270	48	58	178	818	228	10,017	506	11,863	960	13,023
1919	2,807	307	72	686	200	955	217	10,638	493	12,586	982	13,568
1920	2,967	282	70	660	187	844	211	10,963	464	12,749	932	13,681
1921	3,136	260	70	748	170	861	239	11,111	462	12,980	941	13,921
State.												
1917	7,099	2,387	2,755	4,992	4,861	5,815	6,566	52,872	15,003	66,066	29,185	95,251
1918	8,346	2,600	2,965	5,589	4,998	6,009	6,925	60,521	16,358	74,719	31,246	106,165
1919	9,003	2,949	3,383	5,925	5,268	7,173	7,263	68,427	16,517	84,474	32,431	116,905
1920	9,745	3,040	3,636	6,593	5,588	7,955	7,496	74,978	16,759	92,566	33,479	126,045
1921	10,087	2,903	3,665	6,823	6,054	7,825	7,524	71,268	16,322	88,819	33,565	122,384

Appendix VII.

Horse-power of Machinery, by Class of Factory and Method of Production, Classified by Industry, 1921.

METROPOLITAN DISTRICT.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 1.—TREATING RAW MATERIALS, &c.									
Boiling-down and tallow refining	6	97	72	1	120	60	4	71	66
Glue	1	268	260	...	.....	.....	2	451	451
Tanning	27	569	296	17	488	393	34	1,176	1,012
Woolsecouring and fellmongering and packing skins	15	2,077	1,467	2	22	17	18	1,457	1,169
Chaff-cutting	...	...	...	4	22	13	28	728	606
Total	49	3,011	2,095	24	652	483	86	3,883	3,304
CLASS 2.—OILS AND FATS.									
Oil and grease	4	62	48	...	.....	.....	6	110	94
Soap and candles	6	734	299	...	.....	.....	8	1,433	1,150
Total	10	796	347	...	.....	.....	14	1,543	1,244
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.									
Asphalt	...	.....	.....	...	.....	.....	3	33	32
Bricks and tiles	39	5,568	3,891	12	1,264	738	27	2,420	1,626
Glass and glass bottles	2	525	320	...	.....	.....	7	1,142	927
Glass (ornamental)	...	.....	.....	1	5	3	18	254	183
Cement	1	12	12	...	.....	.....	3	250	234
Marble and slate	1	30	30	2	48	26	7	305	302
Modelling and fibrous plaster	...	.....	.....	2	30	12	15	102	80
Monumental masons	1	8	7	...	.....	.....	6	220	195
Pottery and earthenware	6	661	384	2	46	35	7	263	242
Stone-dressing	8	192	153	...	.....	.....	12	438	356
Other works	1	40	30	2	398	154	11	916	734
Total	59	7,036	4,827	21	1,791	968	115	6,343	4,911
CLASS 4.—WORKING IN WOOD.									
Incubators	...	.....	.....	1	6	4	1	2	2
Boxes and packing-cases	2	716	275	1	2	2	45	1,422	1,099
Cooperage	...	.....	.....	...	.....	.....	10	235	226
Joinery	7	1,438	726	31	404	331	113	3,104	1,837
Saw-milling—timber	22	4,490	3,203	3	60	23	27	2,703	2,216
firewood	32	378	274	4	58	56	15	236	211
Wood-turning	...	.....	.....	3	21	12	7	110	101
Other works	...	.....	.....	4	33	33	19	360	278
Total	63	7,022	4,478	47	584	461	237	8,170	5,970
CLASS 5.—METAL WORKS, MACHINERY, &c.									
Agricultural implements	...	.....	.....	4	120	61	5	156	150
Brass and copper	3	495	471	3	37	35	52	413	336
Cutlery	...	.....	.....	...	.....	.....	25	252	232
Engineering	17	2,203	1,451	26	629	418	193	5,353	4,057
Galvanised iron	1	8	6	2	30	29	29	346	289
Iron works, foundries, and boiler-making	8	700	615	10	46	34	75	1,720	1,532
Iron safes and doors	...	.....	.....	...	.....	.....	4	38	29
Lead-mills	...	.....	.....	...	.....	.....	2	84	59
Railway carriage works	2	340	265	...	50	.....	2	159	109
Smelting and ore-dressing	1	16	10	...	.....	.....	4	403	211
Stoves and ovens	...	.....	.....	3	78	65	14	898	725
Tinsmithing	1	45	10	3	191	108	15	521	432
Wire-working	...	.....	.....	2	25	22	11	1,618	1,599
Other metal works	...	.....	.....	5	269	192	62	916	617
Plumbing	...	.....	.....	1	3	1	6	16	16
Farriery	...	.....	.....	2	6	6	14	23	21
Total	33	3,807	2,828	61	1,484	971	513	12,916	10,414
CLASS 6.—CONNECTED WITH FOOD AND DRINK, &c.									
Bacon	4	182	146	...	.....	.....	6	140	138
Butchers' small-goods	10	68	50	29	248	168	295	1,529	1,437
Margarine	2	32	31	1	52	42	3	173	147
Meat-preserving	4	1,817	1,061	1	10	2	3	399	368
Biscuits	2	595	525	1	16	12	8	733	625
Bread and pastry	3	60	55	21	137	100	133	967	831
Confectionery	4	373	245	5	119	101	60	1,247	1,017
Corn-flour and oatmeal	3	131	106	...	.....	.....	10	771	697
Flour-milling	4	1,080	927	...	70	.....	15	2,005	1,663
Jam and fruit preserving	5	253	240	...	.....	.....	14	395	295
Pickles, sauces, and vinegar	2	24	20	...	.....	.....	5	101	83
Dog biscuits and poultry foods	1	150	145	...	.....	.....	7	385	266
Self-raising flour	...	.....	.....	1	3	3	4	44	37
Sugar refining	1	250	142	...	.....	.....	1	1,695	1,695
Aerated waters	2	20	12	4	20	16	19	450	386
Brewing	4	3,418	1,948	1	14	10	5	2,377	1,680
Condiments, Eastern goods, &c.	4	459	391	2	84	39	26	1,032	970
Distillery	...	10	.....	...	.....	.....	1	268	268
Ice and refrigerating	13	4,683	2,916	19	973	686	38	1,820	1,384
Tea-blending	...	...	...	..	.....	.....	15	216	184
Wines and spirits	1	75	25	1	42	42	12	50	45
Tobacco, cigars, &c.	...	.....	.....	2	255	234	8	1,394	1,041
Total	69	13,680	8,985	88	2,043	1,455	668	18,181	15,257

Appendix VII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, &c.									
Woollen mills	4	789	737	1	200	160	6	1,398	1,334
Boots and shoes—order and repairing	...	.....	.....	6	17	14	259	365	332
factory made	1	100	50	7	284	216	79	1,128	979
Clothing—men's slops	...	.....	.....	...	8	.....	58	384	362
women's slops	...	.....	.....	1	4	4	114	296	258
tailoring	...	.....	.....	...	.....	.....	67	135	118
Corsets	...	.....	.....	...	.....	.....	8	54	49
Dressmaking—makers' materials	...	.....	.....	1	40	3	48	280	192
customers' materials	...	.....	.....	...	.....	.....	22	23	23
Dye works	7	98	73	1	3	3	14	102	78
Furriery	1	8	2	1	4	4	6	10	10
Hats and caps	4	504	179	...	.....	.....	21	524	246
Hosiery, knitting, &c.	2	35	22	1	2	2	39	551	460
Oilskins and waterproof clothing	2	8	3	...	.....	.....	5	16	11
Shirts, ties, and searfs	...	.....	.....	2	40	39	37	189	157
Umbrellas	...	.....	.....	...	.....	.....	4	9	8
Underclothing	...	.....	.....	1	4	2	59	169	152
Wigs and Hairwork	...	.....	.....	...	.....	.....	2	1	1
Bags and saeks	...	.....	.....	...	.....	.....	6	208	174
Rope and twine	1	160	169	2	501	411	7	204	174
Tents and tarpaulins	..	.....	.....	1	5	5	5	14	10
Total	22	1,702	1,226	25	1,112	863	866	6,060	5,128
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.									
Die-sinking and engraving	...	.....	.....	...	.....	.....	15	52	48
Electro- and stereo-typing, printers' materials, &c.	...	.....	.....	1	8	3	15	278	194
Paper bags and boxes	...	.....	.....	2	41	26	9	250	203
Paper-mills	3	2,766	2,074	...	73	.....	1	7	3
Photo.-engraving, photo. materials, &c.	...	.....	.....	...	.....	.....	16	84	71
Printing, bookbinding, and stationery	3	189	87	33	666	457	253	5,318	3,954
Total	6	2,955	2,161	36	788	486	309	5,989	4,473
CLASS 9.—MUSICAL INSTRUMENTS, &c.									
Pianos and sewing-machines	...	.....	.....	1	70	70	13	339	321
CLASS 10.—ARMS AND EXPLOSIVES.									
Explosives	...	.....	.....	...	.....	.....	4	37	31
CLASS 11.—VEHICLES, SADDLERY, HARNESS, &c.									
Coaches and waggons	3	43	20	5	74	52	35	382	292
Cycles and motor-cars	2	6	5	23	146	114	213	1,259	1,019
Perambulators	...	.....	.....	..	.....	.....	5	28	21
Saddlery and harness	...	.....	.....	...	.....	.....	14	59	44
Naves and spokes	1	85	85	1	8	8	3	227	167
Whips	...	.....	.....	...	.....	.....	...	.....	.....
Total	6	134	110	29	228	174	270	1,955	1,543
CLASS 12.—SHIPBUILDING, &c.									
Docks and slips	3	1,243	1,243	...	.....	.....	1	504	504
Sailmaking	...	.....	.....	...	.....	.....	2	5	5
Ship and boat building	4	303	148	4	73	48	13	403	332
Total	7	1,546	1,391	4	73	48	16	912	841
CLASS 13.—FURNITURE, BEDDING, &c.									
Bedding and flock	2	76	44	2	24	13	33	585	471
Carpet-sewing	...	.....	.....	1	10	8	2	34	30
Iron bedsteads	...	.....	.....	...	.....	.....	3	160	130
Billiard-tables	...	.....	.....	...	.....	.....	1	16	16
Chair-making	1	55	45	1	4	4	14	2,169	1,135
Furniture—European	1	40	40	12	195	171	143	2,018	1,764
Chinese	...	.....	.....	...	.....	.....	18	206	188
Bamboo and Wicker	...	.....	.....	...	.....	.....	...	.....	.....
Picture frames	...	.....	.....	...	.....	.....	23	31	28
Window blinds	...	.....	.....	...	.....	.....	5	20	12
Total	4	171	129	16	233	196	242	3,239	2,774
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.									
Blue, baking-powder, soda, &c.	1	15	15	...	27	.....	13	459	369
Chemical works and drugs	8	161	102	4	43	28	42	894	727
Fertilisers	4	82	59	...	.....	.....	2	98	60
Perfumes and essences	...	.....	.....	...	.....	.....	13	107	88
Paints and varnishes	2	8	4	2	82	45	17	1,474	789
Other minor works	2	127	126	...	.....	.....	3	408	221
Total	17	393	306	6	152	73	90	3,440	2,254
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.									
Optical instruments	...	.....	.....	...	.....	.....	17	51	45
Surgical instruments	...	.....	.....	...	.....	.....	4	8	8
Other minor works	...	.....	.....	...	.....	.....	4	4	3
Total	...	.....	.....	...	.....	.....	25	63	56
CLASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.									
Electro-plating	...	.....	.....	2	40	34	27	261	218
Jewellery	...	.....	.....	...	.....	.....	67	249	233
Total	...	.....	.....	2	40	34	94	510	451

Appendix VII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 17.—LIGHT, HEAT, AND POWER.									
Electrical apparatus	...	.....	.....	...	30	.....	68	571	476
Electric light and power works*	6	51,865	47,225	46	1,746	1,191	44	2,581	2,447
Gas	4	5,219	1,785	4	710	573	5	1,387	544
Lamps and gas mantles	...	.....	.....	...	.....	.....	6	83	61
Hydraulic power	2	1,699	836	...	.....	.....	1	5	5
Coke works	2	1,404	989	...	.....	.....	1	365	309
Total	14	60,187	50,835	50	2,486	1,764	125	4,992	3,842
CLASS 18.—LEATHERWARE (EXCEPTING SADDLERY AND HARNESS).									
Fancy leather	2	108	108	...	.....	.....	19	345	300
Leather belting	...	.....	.....	...	.....	.....	6	47	45
Portmanteaux and bags	...	.....	.....	1	16	7	9	69	58
Other minor works	...	.....	.....	...	.....	.....	18	56	43
Total	2	108	108	1	16	7	52	517	446
CLASS 19.—MINOR WARES (NOT ELSEWHERE INCLUDED).									
Baskets, &c.	...	.....	.....	...	.....	.....	2	10	8
Brooms and brushes	...	.....	.....	1	10	7	21	109	91
Florists and seedsmen	...	.....	.....	...	.....	.....	4	39	25
Laundries—European	17	451	237	14	101	87	93	879	752
,, Chinese	...	.....	.....	...	.....	.....	2	8	8
Rubber goods	1	1,215	898	...	.....	.....	7	780	713
Toys	...	.....	.....	5	16	12	18	94	71
Painting and signwriting	...	.....	.....	...	.....	.....	2	4	3
Other minor works	3	15	8	1	8	1	11	101	78
Total	21	1,681	1,143	21	135	107	160	2,024	1,749
Total, All Classes	382	104,229	80,969	432	11,887	8,160	3,920	81,113	65,009

*NOTE.—These figures include 39 gas plants using 696 h.-p., and 35 electric and oil plants using 510 h.-p., for lighting purposes at Picture Shows.

Appendix VIII.

Horse-power of Machinery used and Method of Production, by Class of Factory, 1921.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
METROPOLITAN DISTRICT.									
I. Treating raw materials, product of pastoral pursuits	49	3,011	2,095	24	652	483	86	3,883	3,304
II. Oils and fats—animal, vegetable, &c.	10	796	347	...	...	..	14	1,543	1,244
III. Processes in stone, clay, glass, &c.	59	7,036	4,827	21	1,791	968	116	6,343	4,911
IV. Working in wood	63	7,022	4,478	47	584	461	237	8,170	5,970
V. Metal works, machinery, &c.	33	3,807	2,828	61	1,484	971	513	12,916	10,414
VI. Connected with food and drink, &c.	69	13,680	8,985	88	2,043	1,455	688	18,181	15,257
VII. Clothing and textile fabrics, &c.	22	1,702	1,226	25	1,112	863	866	6,060	5,128
VIII. Books, paper, printing, and engraving, &c.	6	2,955	2,161	36	788	486	309	5,989	4,473
IX. Musical instruments, &c.	...	...	...	1	70	70	13	339	321
X. Arms and explosives	...	...	...	...	...	...	4	37	31
XI. Vehicles and fittings, saddlery and harness, &c.	6	134	110	29	228	174	270	1,955	1,543
XII. Ship and boat building, &c.	7	1,546	1,391	4	73	48	16	912	841
XIII. Furniture, bedding, &c.	4	171	129	16	233	196	242	3,239	2,774
XIV. Drugs, chemicals, and by-products	17	393	306	6	152	73	90	3,440	2,254
XV. Surgical and other scientific instruments	...	...	...	...	...	...	25	63	56
XVI. Jewellery and plated-ware, &c.	...	...	...	2	40	34	94	510	451
XVII. Heat, light, and power	14	60,187	50,835	50	2,486	1,764	125	4,992	3,842
XVIII. Leatherware, n.e.i.	2	108	108	1	16	7	52	517	446
XIX. Minor wares, n.e.i.	21	1,681	1,143	21	135	107	160	2,024	1,749
Total	382	104,229	80,969	432	11,887	8,160	3,920	81,113	65,009
NEWCASTLE DISTRICT.									
I. Treating raw materials, product of pastoral pursuits	3	219	219	2	19	17	6	238	209
II. Oils and fats—animal, vegetable, &c.	3	207	98	...	...	...	2	109	92
III. Processes in stone, clay, glass, &c.	17	1,109	622	...	50	...	12	607	457
IV. Working in wood	122	4,050	2,929	8	88	60	30	421	325
V. Metal works, machinery, &c.	10	38,461	22,614	13	163	111	30	9,742	6,558
VI. Connected with food and drink, &c.	45	2,258	1,225	45	481	358	114	1,380	1,054
VII. Clothing and textile fabrics, &c.	1	15	12	3	16	10	32	122	97
VIII. Books, paper, printing and engraving, &c.	...	...	...	10	145	127	23	169	134
XI. Vehicles and fittings, saddlery and harness, &c.	5	119	77	11	61	43	35	134	120
XII. Ship and boat building, &c.	5	80	60	1	3	3	1	5	5
XIII. Furniture, bedding, &c.	1	8	4	7	57	39	12	148	123
XV. Surgical and other scientific instruments	...	...	...	...	...	...	2	2	2
XVI. Jewellery and plated-ware, &c.	...	...	...	...	...	...	2	8	8
XVII. Heat, light, and power	13	4,207	2,470	15	493	397	30	1,990	643
XIX. Minor wares, n.e.i.	4	174	124	2	29	21	3	57	36
Total	229	50,907	30,454	117	1,605	1,186	334	15,132	9,863

Appendix VIII—*continued.*

Class of Factory..	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
REST OF STATE.									
I. Treating raw materials, products of pastoral pursuits	50	782	555	10	250	136	21	289	217
II. Oils and fats—animal, vegetable, &c.	5	38	26	...	...	...	...	...	...
III. Processes, in stone, clay, glass, &c.	36	10,917	5,887	7	380	319	30	286	168
IV. Working in wood	278	7,246	5,057	38	645	479	84	893	621
V. Metal works, machinery, &c.	17	6,234	5,413	34	321	239	51	5,919	3,724
VI. Connected with food and drink, &c.	142	9,776	5,902	170	4,268	2,891	304	2,517	1,434
VII. Clothing and textile fabrics, &c.	3	151	146	13	80	72	37	107	87
VIII. Books, paper, printing, engraving, &c.	4	44	29	53	312	217	90	350	260
XI. Vehicles and fittings, saddlery and harness, &c.	9	145	108	85	623	441	185	829	673
XIII. Furniture, bedding, &c.	2	26	17	9	68	58	17	77	65
XIV. Drugs, chemicals, &c.	3	65	45	...	...	...	...	...	...
XV. Surgical and other scientific instruments, &c.	...	...	...	...	...	...	1	1	1
XVI. Jewellery and plated-ware, &c.	38	5,187	4,269	66	2,726	2,090	109	1,357	1,187
XVII. Heat, light, and power	7	80	53	4	20	20	3	16	16
XIX. Minor wares, n.e.i.	...	...	...	1	4	4	1	3	3
Total	594	40,691	27,507	490	9,697	6,966	933	12,644	8,456
STATE.									
I. Treating raw materials, product of pastoral pursuits	102	4,012	2,869	36	921	636	113	4,410	3,730
II. Oils and fats—animal, vegetable, &c.	18	1,041	471	...	...	...	16	1,652	1,336
III. Processes in stone, clay, glass, &c.	112	19,062	11,336	28	2,221	1,287	158	7,236	5,536
IV. Working in wood	463	18,318	12,464	93	1,317	1,000	351	9,484	6,916
V. Metal works, machinery, &c.	60	48,502	30,855	108	1,968	1,321	594	28,577	20,696
VI. Connected with food and drink, &c.	256	25,714	16,112	303	6,792	4,704	1,116	22,078	17,745
VII. Clothing and textile fabrics, &c.	26	1,868	1,384	41	1,208	945	935	6,289	5,312
VIII. Books, paper, printing, and engraving, &c.	10	2,999	2,190	99	1,245	830	422	6,508	4,867
IX. Musical instruments, &c.	...	...	...	1	70	70	13	339	321
X. Arms and explosives, &c.	...	...	...	...	..	...	4	37	31
XI. Vehicles and fittings, saddlery and harness, &c.	20	398	295	125	912	658	490	2,918	2,336
XII. Ship and boat building, &c.	12	1,626	1,451	5	76	51	17	917	846
XIII. Furniture, bedding, &c.	7	205	150	32	358	293	271	3,464	2,962
XIV. Drugs, chemicals, and by-products	20	458	351	6	152	73	90	3,440	2,254
XV. Surgical and other scientific instruments	...	..	...	...	...	...	28	66	59
XVI. Jewellery and plated-ware, &c.	...	...	...	3	44	38	97	521	462
XVII. Heat, light, and power	65	69,581	57,574	131	5,705	4,251	264	8,339	5,672
XVIII. Leatherware, n.e.i.	2	108	108	1	16	7	52	517	446
XIX Minor wares, n.e.i.	32	1,935	1,320	27	184	148	166	2,097	1,801
Total	1,205	195,827	138,930	1,039	23,189	16,312	5,187	108,889	83,328

Appendix IX.

Horse-power of Machinery used and Method of Production—1917–1921.

Year.	Steam.		Gas.		Electricity and other.		Total.	
	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	*No. of Factories.	Horse-power.
METROPOLITAN DISTRICT.								
1917	421	60,937	576	10,382	2,649	39,052	3,646	110,371
1918	404	70,446	501	9,282	2,960	49,810	3,865	129,538
1919	399	70,286	538	9,920	3,087	51,633	4,024	131,839
1920	421	77,695	494	9,618	3,602	58,155	4,517	145,468
1921	382	80,969	432	8,160	3,920	65,009	4,734	154,138
NEWCASTLE DISTRICT.								
1917	212	46,252	96	902	188	10,352	496	57,506
1918	199	19,407	107	1,014	241	8,637	547	29,058
1919	211	20,071	103	1,023	261	9,863	575	30,957
1920	235	30,671	113	1,308	290	6,555	638	38,534
1921	229	30,454	117	1,186	334	9,863	680	41,503
REST OF STATE.								
1917	441	26,851	397	5,436	584	5,679	1,422	37,966
1918	525	26,709	465	8,319	764	9,240	1,754	44,268
1919	530	25,520	473	7,088	805	10,863	1,808	43,471
1920	582	29,893	462	7,258	857	7,237	1,901	44,388
1921	594	27,507	490	6,966	933	8,456	2,017	42,929
STATE.								
1917	1,074	134,040	1,069	16,720	3,421	55,083	5,564	205,843
1918	1,128	116,562	1,073	18,615	3,965	67,687	6,166	202,864
1919	1,140	115,877	1,114	18,031	4,153	72,359	6,407	206,267
1920	1,238	138,259	1,069	18,184	4,749	71,947	7,056	228,390
1921	1,205	138,930	1,039	16,312	†5,187	†83,328	7,431	238,570

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using power.

† Including 100 factories using oil of 1,646 horse-power (Metropolitan District).
" 107 " " 594 " (Newcastle District).
" 507 " " 2,387 " (Rest of State).
714 " " 4,627 " (State).

Appendix X.

Employment of Children.

Certificates of Fitness by class of Factory in Districts, 1921.

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Class 1.—Treating Raw Material—the Products of Pastoral Pursuits.									
Tanneries	38	1	...	...	...	...	...	...	39
Wool scouring	5	...	...	...	...	...	...	...	5
Class 2.—Oils and Fats—Animal and Vegetable.									
Kerosene and oil	19	...	...	...	...	...	...	...	19
Soap, &c.	47	55	5	7	...	...	...	...	114
Class 3.—Processes in Stone, Clay, Glass, &c.									
Glass and bottles	38	...	...	...	...	...	...	...	38
Marble and slate	4	1	...	...	...	...	...	...	5
Potteries and bricks	175	...	3	...	...	...	1	...	179
Lime and cement	4	...	...	...	...	...	1	...	5
Class 4.—Working in Wood.									
Sawmills and joinery	115	...	18	...	...	...	7	...	140
Class 5.—Metal Works and Machinery, &c.									
Brass and copper	40	1	...	...	...	...	1	...	42
Engineering	227	2	69	...	...	...	12	...	310
Ironworks, stoves, &c.	143	2	17	...	...	...	4	...	166
Smelting and ore works	1	...	21	...	...	...	8	...	30
Wire works	20	...	...	...	...	...	...	...	20
Class 6.—Connected with Food and Drink, and the Preparation thereof.									
Aerated waters	6	3	3	...	4	...	1	...	17
Biscuits	341	209	7	5	...	...	...	...	562
Bread and pastry	23	2	9	...	...	...	2	...	36
Breweries	.....	...	...	...	...	...	1	...	1
Condiments	11	18	3	1	...	...	...	...	33
Confectionery	69	179	9	13	...	...	...	3	273
Flour mills	1	1	...	...	...	...	1	...	3
Groceries and packing	74	84	3	...	...	...	1	...	162
Ice and refrigerating	1	...	16	...	...	...	1	...	18
Jam	12	3	...	...	...	...	...	...	15
Meat preserving	16	...	...	...	...	...	...	...	16
Tobacco	39	72	...	...	...	...	...	...	111
Class 7.—Clothing and Textile Fabrics, and Fibrous Materials.									
Artificial flowers	.....	21	...	...	...	...	...	...	21
Boots and shoes	145	218	3	...	...	...	3	4	373
Calico bags	9	10	...	...	...	...	...	...	19
Clothing	44	356	5	85	...	...	...	10	500
Corsets	1	71	...	...	...	...	...	...	72
Dressmaking	13	408	...	5	...	...	...	1	427
Hats and caps	60	182	...	3	...	...	...	...	245
Hosiery and knitting	27	215	...	...	...	...	...	...	242
Rope	42	8	...	...	...	...	...	...	50
Shirts	9	222	...	2	...	...	...	...	233
Tents, &c.	8	5	...	...	...	...	...	...	13
Umbrellas	10	13	...	...	...	...	...	...	23
Whiteworking	.....	90	...	...	...	...	...	...	90
Woollen mills	43	79	...	...	...	...	...	5	127
Class 8.—Books, Papers, Printing, Engraving.									
Bookbinding	7	72	...	...	...	...	...	...	79
Paper boxes	49	85	1	...	...	...	...	...	135
Paper mills	8	18	...	...	...	...	...	...	26
Photography	12	11	...	...	...	...	...	...	23
Printing	296	59	36	...	3	...	13	...	407
Type founding	7	1	...	...	...	...	...	...	8
Class 9.—Musical Instruments, &c. Pianos, Organs and Sewing Machines.									
Musical instruments	17	1	...	...	...	...	...	...	18
Class 11.—Vehicles and Fittings, Saddlery, Harness, &c.									
Coachbuilding	13	...	11	...	...	...	11	...	35
Motors and cycles	30	...	...	...	...	...	16	...	46
Class 13.—Furniture, Bedding, &c.									
Bedsteads, bedding	19	2	...	...	...	...	1	...	22
Furniture	87	12	15	...	2	...	2	...	118
Class 14.—Drugs, Chemicals and By-Products.									
Chemicals and Blue	41	65	21	2	...	...	...	...	129
Paints and Varnishes	52	22	...	...	...	...	...	...	74
Class 16.—Timepieces, Jewellery and Plated Ware.									
Jewellery	16	10	...	...	...	...	...	...	26

Appendix X—*continued.*

Class o Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Class 17.—Light, Heat and Power.									
Electric light, &c.	15	...	...	...	...	...	1	...	16
Class 18.—Leatherware, excepting Harness and Saddlery.									
Leather bags, &c.	75	29	...	...	...	...	...	...	104
Class 19.—Minor Wares not elsewhere included.									
Brooms	16	7	2	...	...	...	...	...	25
Laundries	3	25	..	3	...	...	...	1	32
Plumbers and tinsmiths ...	101	13	6	...	...	...	3	...	123
Rubber goods	36	41	...	...	...	...	...	...	77
Toys....	13	2	...	...	...	...	...	...	15
Miscellaneous	46	30	10	...	3	...	...	...	89
Total	2,839	3,036	293	126	12	...	91	24	6,421

Appendix XI.

Accidents by Machinery, 1918–21.

Machines.	1918.	1919.	1920.	1921.
Metal Working Machines—				
Drills	14	10	15	21
Emery wheels	23	27	23	33
Guillotines	17	3	3	5
Lathes	21	19	28	24
Milling	2	3	4	3
Polishing	...	5	5	7
Power presses	28	26	35	31
Rivetting	...	...	3	2
Rolling	...	4	5	6
Screwing	2	1	2	1
Shaping	...	...	3	4
Shears	6	9	5	4
Slotting	5	5	2	1
Steam hammers	2	2	6	10
Wire-working	4	24	37	29
Other tinsmiths' machines	8	8	6	3
Other ironworking machines	10	12	10	14
	142	158	192	198
Woodworking Machines—				
Band saws...	6	15	12	7
Boring	...	...	4	8
Circular moulders ...	12	19	25	18
Circular saws	90	82	92	82
Jointers	...	...	38	28
Lathes	...	...	7	4
Planers	33	36	19	12
Other woodworking machines	12	12	11	12
	153	164	208	171
Printing Machines—				
Cardboard box machines	9	16	12	8
Envelope machines ...	3	...	...	3
Guillotines	...	2	9	4
Platens	4	8	7	9
Printing machines ...	15	15	9	10
Wire-stitching machines	14	13	13	4
Other printing machines	10	2	8	8
	55	56	58	46
Food and Drink Machines—				
Biscuit machines	9	...	4	6
Confectionery machines ...	4	6	6	6
Crown corking machines	...	...	...	5
Dough brakes	6	2	8	1
Mincing	3	1	6	3
Mixing	6	1	2	3
Tobacco	2	3	2	4
Other food and drink machines	21	10	11	1
	51	23	39	29

Machines.	1918.	1919.	1920.	1921.
Stone, clay, &c., Machines—				
Brick presses	7	2	3	5
Pans	...	...	2	..
Tile presses	6	9	2	2
Other stone, &c., machines	3	1	1	...
	16	12	8	7
Leather Working Machines—				
Power presses	*5	*10	14	13
Rolling			...	3
Shaving			3	...
Other leather machines ...			3	1
	5	10	20	17
Clothing Machines—				
Band knives	...	...	3	...
Boot machines	18	7	18	7
Fur-cutting	...	2	4	...
Ropemaking	4	5	2	6
Sewing	4	7	9	10
Wool machines	21	12	12	12
Other clothing machines	3	3	7	2
	50	36	55	37
Laundry Machines—				
Calenders	6	4	3	4
Folding	...	...	1	...
Hydro-extractors ...	...	1	...	..
Ironing	5	4	5	1
	11	9	9	5
Rubber Working Machines—				
Power presses	...	*7	2	1
Rolling	...		2	...
Other rubber machines ...	...		4	2
	...	7	8	3
Brushmaking machine ...	...	...	...	1
Paintmaking machine ...	...	...	...	1
Soapmaking machines ...	...	...	6	2
Miscellaneous Machines—				
Elevators and cranes ...	24	15	11	26
Engines	9	10	6	9
Fan	...	...	1	1
Mill gearing	30	61	36	48
Other machines	36	23	...	...
	99	109	54	84
Total	582	584	657	601

* Unclassified.

Appendix XII.

Prosecutions by Districts, 1917–21.

Year.	Informations Laid.	Convictions.	Dismissals.	Withdrawals.
		Metropolitan.		
1917	37	32	1	4
1918	42	35	2	5
1919	47	46	....	1
1920	89	85	.. ..	4
1921	67	62	4	1
		Newcastle.		
1917	10	9	.....	1
1918	7	6	. .....	1
1919	13	13	.....	...
1920	25	23	.. ..	2
1921	11	10	1	... .
		Rest of State.		
1917	1	1	.. ..	....
1918	....	.....	....	.. ..
1919	13	13	.....	.....
1920	5	5	.....	.....
1921	3	3	.. ..	.....
		The State.		
1917	48	42	1	5
1918	49	41	2	6
1919	73	72	.. ..	1
1920	119	113	.....	6
1921	81	75	5	1

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LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

DEPARTMENT OF LABOUR AND INDUSTRY.

REPORT

ON THE WORKING OF THE

FACTORIES AND SHOPS ACT 1912

DURING THE YEAR 1922.

Printed under No. 6 Report from Printing Committee, 11 October, 1923.

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THE TWENTY-SIXTH SERIES OF ANNUAL REPORTS BY INSPECTORS APPOINTED UNDER THE FACTORIES AND SHOPS ACT, 1912, FURNISHED TO THE MINISTER FOR LABOUR AND INDUSTRY IN TERMS OF SECTION 19 OF THAT ACT.

The Under Secretary, Department of Labour and Industry, to The Honorable the Minister for Labour and Industry.

Department of Labour and Industry,
4 October, 1923.

Sir,

I have the honour to forward for submission to Parliament, in terms of section 19 of the Factories and Shops Act, 1912, Annual Reports on the operations of that Act by each of the Inspectors appointed thereunder, for the year ending the 31st December, 1922.

I have, &c.,
E. J. PAYNE,
Under Secretary.

OFFICE OF THE CHIEF INSPECTOR OF FACTORIES AND INVESTIGATION OFFICER.*

Operations.

Report in terms of Section 19 of the Factories and Shops Act, 1912.

Arrangement of Inspectorial Districts.

The provisions of the Factories and Shops Act were extended to cover the whole of the State, as from the 1st July, 1915. The area outside of the Metropolitan District is divided up into Country Districts, and the following statement will show the arrangement of these districts at the close of 1922 :—

District.	Head Centre.	Staff.
Newcastle	Newcastle	Senior Inspector Huntley. Inspector Clark. ,, Middlemiss.
North Coast	Lismore	Inspector McEvoy.
North Western	Tamworth	Senior Inspector Burkitt.
South Coast	Wollongong	Inspector Waugh.
South-Western	Goulburn	,, Wallace.
Southern	Wagga	,, Durack.
Western	Orange	,, Baker.
Broken Hill	Broken Hill	,, Aldington

In addition to their work of factory inspection, the Country District Officers are required to carry out work as Inspectors under the Industrial Arbitration Act and the Early Closing Acts, as well as that pertaining to the Departmental policy of Country Labour Exchanges.

Pursuant to the Ministerial determination to provide for the interchange of Inspectors in the various districts at regular periods, changes in the country Inspectorial Staff at Tamworth and Broken Hill were made during the year.

Mr. C. J. Alderdice, Chief Inspector of Factories and Investigation Officer, retired from the Public Service as from the 24th January, 1922.

Mr. W. I. Taylor, Superintending Inspector, was appointed Chief Inspector of Factories and Investigation Officer, as from the 25th January, 1922.

Statistics.

Cards of instruction served on the occupiers of factories within the Metropolitan District numbered 17,674 for 1922, as compared with 15,546 in 1921 ; in the Newcastle District, 2,841 in 1922, as against 2,563 in 1921 ; in the Broken Hill District, 172 in 1922, compared with 167 in 1921 ; in the rest of the State 5,400, as against 4,920 in the previous year.

Returns collected from factory occupiers for 1922 show that at the date of collecting the returns (25th November, 1922) 10,674 factories throughout the State employed 123,077 persons, compared with 10,087 factories employing 122,384 persons at the end of 1921, an increase of 587 factories and 693 persons. Male employment increased by 1,884, there being an increase of 1,185 under 21 years of age, and a decrease of 3,069 over that age. Female employment increased by 2,577, 1,550 being under and 1,027 over 21 years of age. Of the total persons employed, 86,935, or 70·6 per cent., were male, and 36,142, or 29·4 per cent., were female.

---

* Matters covered by the Boiler Inspection Regulations made under Section 62 of the Factories and Shops Act, 1912, are reported upon by the Departmental Engineer and Chief Inspector of Scaffolding and Lifts.

The following statement will show the increase or decrease in the number of factories and persons, males and females, employed therein, from the year 1915, when the whole of the State was brought under the provisions of the Act, to 1922 inclusive :—

Year.	Factories registered.	Increase over previous year.	Persons employed.		Total.	Increase over previous year.		Total.	Percentage of total increase.	
			Males.	Females.		Males.	Females.		Males.	Females.
1915	7,425	1,432	70,517	28,706	99,223	7,181	1,901	9,082	79·1	20·9
1916	8,065	640	63,895	28,757	92,652	*6,622	51	*6,571	*100·8	0·8
1917	8,099	34	66,066	29,185	95,251	2,171	428	2,599	83·6	16·4
1918	8,346	247	74,719	31,246	105,965	8,653	2,061	10,714	80·8	19·2
1919	9,003	657	84,474	32,431	116,905	9,755	1,185	10,940	89·2	10·8
1920	9,745	742	92,566	33,479	126,045	8,092	1,048	9,140	88·6	11·4
1921	10,087	342	88,819	33,565	122,384	*3,747	86	*3,661	102·3	2·3
1922	10,674	587	86,935	36,142	123,077	*1,884	2,577	693	*271·9	371·9

*Decrease.

The number of effective registrations of factories as at the 31st December, 1922, was 10,746, as compared with 10,045 at the close of the preceding year.

The following statement shows the numerical alteration in factory registrations at 31st December, 1921 and 1922 :—

District.	Registrations effective at 31st December, 1921.	1922.		Increase.	Registrations effective at 31st December, 1922.
		Registrations.	Cancellations.		
Metropolitan	5,914	1,713	1,196	+517	6,431
Newcastle	1,016	274	181	+ 93	1,109
Broken Hill	139	15	14	+ 1	140
Rest of State	2,976	702	612	+ 90	3,066
Total	10,045	2,704	2,003	+701	10,746

Detailed figures as to the number and classes of factories, number and sex of employees, and horse-power of machinery used in the various districts of the State will be found in the Appendices I to XII.

On the 25th November, 1922, there were 6,367 registered factories in the Metropolitan District, employing 100,690 persons, an increase of 433 factories and 5,531 persons, compared with the figures at the end of the previous year. Of this increase, males represented 3,038, or 55 per cent., and females 2,493, or 45 per cent., 1,764, or 31·9 per cent., and 1,088, or 19·6 per cent., being respectively males and females over the age of 21 years. Of the total persons employed, males represented 66,888, and females 33,802, or 66·4 and 33·6 per cent. respectively. Only 6,433, or 6·4 per cent., were under 16 years of age ; 11,380, or 11·3 per cent., were between 16 and 18 years ; 14,786, or 14·7 per cent., were between 18 and 21 years ; and the remainder, 68,091, or 67·6 per cent., were over 21 years of age.

Of the total males employed, 3,859, or 3·8 per cent., were under 16 years of age ; 5,456, or 8·2 per cent., between 16 and 18 years ; 7,244, or 10·8 per cent., between the ages of 18 and 21 ; and the remainder, 51,614, or 77·2 per cent., were over 21 years of age.

Of the total females employed, 3,859, or 11·4 per cent., were under 16 years of age ; 5,924 or 17·5 per cent., between 16 and 18 years ; 7,542, or 22·3 per cent., between the ages of 18 and 21 years ; and the remainder, 16,477, or 48·8 per cent., were over 21 years of age.

It is satisfactory to report that out of a total employment in the Metropolitan District of 100,690, only 6,433, or 6·4 per cent., were under 16 years of age. A comparison of the figures of each sex under and over 21 years of age is somewhat interesting, inasmuch as it demonstrates that, whereas the difference between the number of females of these ages is slight, the excess of males over 21 years of age is large. There were more females than males under 21 years of age employed in the factories in the Metropolitan District, but the males over 21 years of age exceeded the number of females over that age in the proportion of more than 3 to 1.

During the period of 1912 to 1914 the percentages of boys and girls under 16 years of age remained about the same, but for the period 1914 to 1922 the percentage slightly increased, as the following table will show :—

Percentage distribution of persons under 16 years of age.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1912	2·3	2·9	5·2	1918	2·4	3·3	5·7
1913	2·2	2·8	5·1	1919	2·6	3·4	6·0
1914	2·3	2·9	5·2	1920	2·5	3·4	5·9
1915	2·8	3·1	5·9	1921	2·6	3·6	6·2
1916	2·6	3·3	5·9	1922	2·6	3·8	6·4
1917	2·5	3·4	5·9				

Taking

Taking the males and females under 16 years of age collectively, there was a slight decrease during 1913 over the previous year, but from 1914 to 1922 the percentage gradually increased, equalling in 1915, 1916, and 1917 that for 1920, as the table indicates. The percentage for 1918 was slightly below that for the three previous years, being 5·7 as against 5·9, but for 1922 it was higher than for any year since 1909, when it was 6·8. The tendency seems to be for females to increase steadily, whilst males fluctuate.

The industry class employing the greatest number of persons in 1922 was clothing and textile fabrics, with 28,585, followed by metal works, machinery, &c., with 14,684, and food and drink, &c., with 14,437, these three classes accounting for 57,706 out of a total of 100,690 employed in all classes of factories in the Metropolitan District.

Clothing and textile fabrics showed a slight increase of 2,440, and metal works, &c., and food and drink increased by 499 and 662 respectively, as compared with 1921. The only decreases in employment were in heat, light, and power (722), and in ship and boatbuilding (719), the latter class now employing only 1,150, the lowest number in any year since 1900, when the figures were 1,144. The greatest number employed in this class in any year was 2,968 in 1920.

The following statement will show the increase or decrease in persons, males and females, from 1915, when the Act was first extended to the whole State, to 1922 inclusive :—

Year.	Persons employed.			Increase over previous year.			Percentage of total increase.	
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
1915	54,891	26,438	81,329	.....	.....	.....	.....	.....
1916	47,378	26,649	74,027	*7,513	211	*7,302	102·9	2·9
1917	48,927	27,223	76,150	1,549	574	2,123	72·9	27·1
1918	55,355	29,145	84,500	6,428	1,922	8,350	77·0	23·0
1919	62,030	30,309	92,339	6,675	1,164	7,839	85·2	14·8
1920	68,583	31,270	99,853	6,553	961	7,514	87·2	12·8
1921	63,850	31,309	95,159	*4,733	39	*4,694	*100·8	·8
1922	66,888	33,802	100,690	3,038	2,493	5,531	55·0	45·0

* Decrease.

The following table shows the increase or decrease in number of factories and persons employed therein during the same period :—

Year.	Number of factories.	Increase over previous year.	Persons employed.	Increase over previous year.
1915	4,758	.....	81,329	.....
1916	4,814	56	74,027	*7,302
1917	4,799	*15	76,150	2,123
1918	4,942	143	84,500	8,350
1919	5,330	388	92,339	7,839
1920	5,842	512	99,853	7,514
1921	5,934	92	95,159	*4,694
1922	6,367	433	100,690	5,531

* Decrease.

Total increase—4,694 factories, 71,095 persons.

As at 25th November, 1922. 1,100 registered factories in the Newcastle District employed 8,571 persons, of whom 7,182, or 83·8 per cent., were males, and 1,389, or 16·2 per cent., were females. 67·8 per cent. of the females employed in the Newcastle District and 21 per cent. of the males were under 21 years of age. The large percentage of adult male employment was due to a great extent to the number employed at the steel and iron works of the Broken Hill Proprietary Company, Limited, at Port Waratah, Rylands Bros. (Aust.) Limited, The Commonwealth Steel Products, Limited, and other large works, aggregating 2,410, or 33·6 per cent. of the total number of males over 21 years of age. These figures are, however, considerably below those for the previous year, owing chiefly to the partial closing down of the Broken Hill Proprietary Company's Steel Works and the Sulphide Corporation's Smelting Works.

In the remainder of the State, there were on 25th November, 1922, on the records of the Department, 3,207 registered factories, employing 13,816 persons, of whom 12,865, or 93·1 per cent., were males, and 951, or 6·9 per cent., females. This was an increase of 71 factories and a decrease of 105 persons, as compared with 1921.

Horse-power of Machinery.

At the end of the year 1922, 7,845 factories throughout the State were using machinery equal to 220,588 horse-power.

Steam power, representing 111,259 horse-power, was used in 1,140 factories ; gas power (16,607 horse-power) in 1,024 factories ; electricity and other (92,722 horse-power) in 5,681 factories.

Child Labour in Factories.

One hundred and seventy-seven children under 14 years of age (116 boys and 61 girls) were granted the special permission of the Minister to engage in factory employment. Seven thousand five hundred and sixty-three children were certified as physically fit for employment in certain classes of factories, and in no case did the examining Medical Officer decline to certify.

Following

Following is a table showing the distribution of the foregoing permits and certificates in the districts in which the State is divided for Departmental purposes :—

District.	Permits granted.			Certificates of Fitness.	
	Special (to children between 13 and 14 years of age).			Issued.	Declined.
	Males.	Females.	Total.		
Metropolitan	116	61	177	6,888	.....
Newcastle	...	.....	...	503	.....
Broken Hill	...	.....	...	24	.....
Rest of State	...	.....	...	148	.....
Total	116	61	177	7,563	.....

By way of comparison, the numbers of special permits granted during the last ten years are shown hereunder, and the allocation of the children who were granted certificates into the various industries is shown in Appendix X.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1913	160	9	169	1918	134	31	165
1914	152	8	160	1919	200	37	237
1915	143	6	149	1920	142	38	180
1916	162	14	176	1921	125	44	169
1917	115	28	143	1922	116	61	177

New Industries.

Prominent among the new industries established during the year is that of the weaving of silk yarn, which is afterwards formed into various articles for wear, with satisfactory results. The completed article is claimed to compare very favourably with the imported garment, and the new industry should have a prosperous future. Employment is given to a large number of females, and the work is both light and interesting. Portion of the factory has been set apart for the production of woollen shawls, articles not hitherto made in this State, and the demand suggests permanence and expansion.

In the northern part of the State a factory was established to produce a poison claimed as effective in the eradication of prickly-pear. The arsenical ore, forming the basis of the product, is obtained from the controlling company's mines in Queensland, and the industry is now in full work.

A new use for scrap leather from boot factories has been found in the manufacture therefrom of leather door mats, and a factory producing these, and like articles, is now kept actively engaged.

A paper match factory began work during the year, and its product may soon be upon the market.

The manufacture of oxygen for commercial purposes was commenced towards the end of the year, and the output is now assuming large proportions. It is claimed that the requirements of the State can be effectively and fully supplied.

Gut strings for violins, and similar instruments, are now made locally, and the same factory is also producing gut capsules for bottles. The demand is satisfactory, and the future of the industry seems assured.

Overtime in Factories.

During 1922 the Minister granted applications for extensions of overtime in respect of 29 factories, affecting 296 female employees. Similar permission was granted during the previous year in respect of 10 factories, involving 241 female employees, and the figures for 1920 were 16 factories, 6 males and 177 females.

The following table sets out the classes of factory in which the additional overtime was worked :—

Class of Factory.	Factories.	Employees.		Total.
		Male.	Female.	
Class VI.—Connected with Food and Drink—				
Condensed milk	1	.....	80	80
Confectionery	1	.....	3	3
Grocery packing	1	.....	54	54
Tobacco	1	.....	5	5
Total	4	.....	142	142
Class VII.—Clothing and Textiles—				
Clothing	4	.....	38	38
Knitting	2	.....	5	5
Total	6	.....	43	43
Class VIII.—Books, Paper, Printing, &c.—				
Paper bags and boxes	1	.....	13	13
Printing and bookbinding	18	.....	98	98
Total	19	.....	111	111
Total, all classes	29	.....	296	296

Fencing and Guarding of Machinery.

As in former years, the provision of efficient safe-guards at dangerous parts of machinery had the unremitting attention of inspectors, and in their efforts they found a growing co-operation of occupiers. Many of the standard guards were still further perfected, and the ratio of progress in this direction was distinctly advanced. The safe-guarding of rolls of certain types had particular attention. These machines are especially dangerous in that an arm may be drawn right into the machine, with possible fatal injury. Dough-brakes used in the bread and pastry industry, and caramel rolls used in the confectionery industry, have unfortunately provided numerous accidents, and a guard has now been approved by the Department which is proving very satisfactory. The new appliance to be fixed to the dough-brake, or caramel rolls, includes a heavy wire guard completely covering the rollers, which remain perfectly visible, and is, owing to its simplicity of operation, which is automatic in its control from the starting lever, an absolutely efficient safeguard, allowing at the same time, perfect freedom of action on the part of both operative and the machine. When the starting lever is moved over, the guard at the feeding end of the machine is locked, and cannot be raised by the operator, while the wire guard over the delivery end of the rolls can be lifted easily to free any material which may adhere to the rollers. On reversing the machine the delivery end becomes the feeding end, and the wire guard at this end is automatically locked, and the delivery end, which was the feeding end in the first operation is automatically free. There is a further safety provision for lifting one or both guards for cleaning or examination purposes, which only permits of such attention when the driving belt is on the loose pulley, and the machine is neutral. The machine cannot then be started while the guards are raised.

Further progress has been made with the guarding of hydro-extractors, either belt-driven or propelled by direct steam action, and it can be claimed that the risk of accident by operatives coming into contact with the revolving baskets of these machines has been practically removed.

The serious injuries inflicted by moving machinery constantly inspire the inspectors to reduce the number of accidents, and their efforts can be materially aided by the co-operation of employer and employee. Safe working is more than an inspector's problem, it is a community problem, and the establishment of "Safety First" organisations and classes among employers and employees must make for the community good.

Accidents in Factories.

During the year, Inspectors furnished reports upon 779 accidents in factories coming within the provisions of section 38, 10 of which proved fatal, and 149 resulted in permanent injury to workmen.

Following is an analysis of the reported accidents, and the extent of injuries:—

Extent of Injury.	Accidents Reported.				
	District.				Total.
	Metropolitan.	Newcastle.	Broken Hill.	Rest of State.	
Fatal	8	1	...	1	10
Permanent Injury—					
Loss of arms	4	1	...	2	7
,, hands	3	...	...	1	4
,, fingers or parts	103	17	...	16	136
,, foot	...	1	...	...	1
,, toes or parts	...	...	...	1	1
Temporary Injury—	110	19	...	20	149
Gas poisoning	13	...	...	...	13
Burns, scalds, &c.	61	22	...	6	89
Cuts, lacerations, bruises—					
On hands	279	51	1	38	369
,, arms	35	8	...	6	49
,, body	21	11	...	10	42
,, feet	5	5	...	3	13
,, head	18	16	...	9	43
Other	2	...	...	...	2
	434	113	1	72	620
Total	552	133	1	93	779

The following statement gives the distribution of accidents as due to machinery or other causes, Appendix XI contains details of machinery at which accidents happened.

Causes of Accident.

Machinery				*Miscellaneous—*	
Metal working	215	Paper, printing	56	Mill gearing	66
Woodworking	180	Leather	21	Engines	5
Stone, clay, &c.	6	Rubber	3	Elevators, conveyors, &c.	24
Food and drink	37	Other	29		
Clothing, &c.	35				

Other Causes.

Dangerous substances—		Electricity	3
Steam	2	Chemicals	9
Hot substances—		Gas	14
Water	8	Other	5
Metal	48		
Other	13	Total	779

The accidents which resulted fatally are briefly described as follows:—

An employee, a general hand in a floor-polish factory, received severe burns, her clothing catching alight through the ignition of a quantity of a preparation of floor polish. How the mixture became ignited was not disclosed, and there was no witness to the actual occurrence, the first intimation of the accident being when another employee saw the deceased's clothing in flames. The employee succumbed to her injuries.

The

The foreman of a woollen mill, who was engaged joining two ends of a belt together, instructed an employee to go up a ladder and hold the belt clear of the shafting, intending him to use both hands in holding the top and bottom parts of the belt. The employee gripped the belt with one hand only, and the foreman's warning cry was too late; the belt gripped the shafting and the employee's arm was drawn in, and, as a result, torn off at the shoulder.

A galvanizer in a wire works was assisting the foreman and night foreman to repair a belt; when the end of the belt was placed over the revolving shaft the lace fouled and the deceased attempted to release it. His hand caught between the belt and the shaft, and he was whirled round the shafting; his hand was torn off, and his arm pulled out of the socket, and upon admission to hospital the arm was amputated. The man died shortly afterwards.

Another fatality arose out of an escape of gas from a coke fire in a new oven erected in a bakehouse. Evidently proper care had not been taken in construction, as fumes from coke (C.O.) penetrated into the bakehouse; for some weeks the men employed in the bakehouse had complained of the fumes and of the effects of the gas—giddiness and violent headache. A workman who commenced work at 4 o'clock one morning, complained about 6 a.m. that he was suffering from the effects of gas, and a doctor was summoned, but the man died before his arrival at 6.20 a.m., and at a subsequent coronial inquiry a verdict of death by carbon-monoxide poisoning was returned.

A gas-engine driver at a picture theatre had complained to the manager of the poor quality of the gas from his engine, and it is surmised that he removed a cap on a pipe in an "inspection pit" at the rear of the gas-engine to clear the pipe without first turning off the gas supply. He was overcome by the fumes.

A sawyer operating a pendulum saw at a case factory was cutting timber into lengths; a warped piece caused the saw to "kick," and throw him off his balance. He kept his hold on the saw-handle, and in pulling it over, fell against the saw, receiving severe abdominal injuries from which he died in hospital.

An engine-driver in a chilling plant, who it is assumed commenced to oil the shafting while it was in motion, was apparently caught by his clothing in the projecting shafting and whirled to his death. There were no witnesses of the accident.

A sawyer at a timber mill, whilst operating a circular saw was struck in the abdomen by a piece of timber hurled violently back from the teeth of the saw. He was given hospital treatment, but later succumbed to his injuries. The saw was not guarded at the time of the accident.

A man was found in a wheel race underneath a fly wheel, having, persumably, been caught in the fly-wheel whilst adjusting an adjacent valve. A partial fence was round the fly-wheel, but there was no protection at the spot where the accident happened.

A sawyer was operating a circular saw, a plank 12 feet long of 7 inches by 1 inch timber, which he was handling, dropped on to the saw, and, being hurled violently backwards, struck him on the temple, inflicting fatal injuries.

Means of Escape in case of Fire.

With the erection of new buildings, and the heightening of existing buildings, compelled by increase in land values and dearth of building land, considerable attention was required with respect to alternative means of escape. Difficulty is created when no notification is received, until the building is completed, of the intention of the owner to use, or let same, for factory purposes. The provision of a fire escape in such cases entails added expense, and discomfort, and produces unnecessary friction. Many "orders" were issued during the year in such cases, and also in several cases where the buildings had been structurally altered and so rendered the provided means of escape unsuitable. Constant vigilance was exercised in this important phase of inspectorial work, and the same attention was given during the year to the means of access to fire escapes being kept constantly free during working hours.

During the year eighty-four certificates, that efficient means of escape from factories had been provided, were issued by the Chief Officer of Fire Brigades.

Prosecutions.

During the year informations for breaches of the Factories and Shops Act and Regulations were laid in sixty cases.

Following are the details:—

		Convictions.	Dismissals.	Withdrawals.	Total.
Section.					
7	Being in occupation of an unregistered factory	3	.....	.....	3
11	Obstructing an inspector	.....	.....	.....	.....
20	Failing to keep premises in a cleanly state	2	.....	.....	2
33	Failing to fence dangerous machinery	26	.....	.....	26
37	Employing female on lift	1	.....	.....	1
38	Failing to report accidents	3	.....	.....	3
39	Failing to provide means of escape in case of fire	.....	.....	.....	.....
41	Employing boys under 16 on prohibited machines	3	.....	.....	3
42	Employing female for more than 5 hours without interval	.....	.....	.....	.....
43	Breaches of overtime provisions	10	.....	.....	10
45	Employing children under 16 without certificates	6	.....	.....	6
46	Employing female between 6 p.m. and 6 a.m	.....	.....	.....	.....
49	Working or permitting work in furniture factories after hours	2	.....	.....	2
56	Failing to comply with Magistrate's Order	1	.....	.....	1
68	Failing to pay tea-money	2	.....	.....	2
Regulation.					
15	Failing to provide W.C. accommodation	.....	.....	.....	.....
16	Failing to provide wash-basins	.....	.....	.....	.....
19	Obstructing fire-escape landings	.....	.....	.....	.....
15 of 8-9-15	Chlorate of potash Regulations	.....	.....	.....	.....
	Total	60	.....	.....	60

BOILER REGULATIONS.

Minister's Certificate of Approval to Inspect Boilers, &c.

The subjoined table indicates Departmental action during the year in this regard :—

Number of certificates of approval granted	8
„ unsuccessful applicants	5
„ holders of certificates decreased by decease	1
„ cancellations of certificates	1

A report in form prescribed was lodged by an accredited inspector in connection with a loco. type boiler. A working pressure of 80 lb. per square inch was certified to. Some six months later the boiler was again inspected by a different accredited inspector who reported adversely on the boiler's condition, and demanded a reduction of pressure to 45 lb, also recommending that another boiler be substituted as speedily as possible.

On receipt of this report a Departmental officer was deputed to investigate the matter, and his report disclosed that the boiler was in such a dilapidated condition that no safe pressure could be assigned to it.

Subsequently, in the course of legal proceedings instituted by the factory occupier against the vendors of the boiler, it appeared in evidence that the first inspector had made a false statement in his certified report, a copy of which was lodged with the Department, inasmuch as no inspection of the boiler had been made on the date recorded therein. His Honor Judge Curlewis characterised the statement of the accredited inspector as a deliberate falsehood, and expressed his intention of drawing the attention of the proper Minister to the matter.

Departmental inquiry into the alleged irregularities of the inspector resulted in the cancellation of the certificate of approval granted to him by the Minister to inspect boilers, &c., in factories.

The following is a summary of notices served upon factory occupiers, to ensure compliance with the requirements of the Boiler Regulations :—

	Boilers.	Other Pressure Vessels.	Total.
Pressure reduced	91	49	140
Pressure increased	53	42	95
Safety valves	21	7	28
Reducing valves	.....	.....	.....
Locked safety valves	48	.....	48
Pressure gauges...	14	1	15
Casing in lever safety valves...	6	.....	6
Gauge-glass protectors	109	.....	109
Water gauges	1	.....	1
Test cocks	27	.....	27
Cocks between check-valve and boiler	33	.....	33
Valve on steam connection	5	.....	5
Isolating valves...	81	1	82
Blow-off cocks	5	.....	5
Patches	.....	.....	.....
Fusible plugs	24	.....	24
Unclassified	1	.. ...	1
Total	519	100	619

During the year, 418 boilers and 273 other pressure vessels were newly installed, and forty boilers and seven other pressure vessels were discarded. The number of the various types of boilers and other pressure vessels inspected is given in the following table :—

	Inspections.			Vessels.		
	First.	Re-inspections.	Total.	Discarded.	Newly Installed.	Explosions.
Boilers—						
Marine Wetback	1	10	11	.....	1	.....
„ Dryback	2	33	35	.....	2	.....
Multitubular	15	242	257	2	15	.....
Cornish	6	155	161	2	17	.....
Vertical	115	583	698	17	115	.....
Colonial	95	752	847	15	95	.....
Locomotive, including Portable, Traction, and Road Rollers	136	347	483	1	119	3*
Watertube	31	397	428	2	36	.....
Lancashire	9	98	107	1	8	.....
Cast-iron Sectional	5	16	21	.....	5	.....
Jackass	3	31	34	.....	3	.....
Wolff	1	2	3	.....	1	.....
Egg-ended	.....	3	3	.....	.....	.....
Other Steam Generators	1	24	25	.....	1	.....
Total	420	2,693	3,113	40	418	3

* Three portable boilers involved.

	Inspections.			Vessels.		
	First.	Re-inspections.	Total.	Discarded.	Newly Installed.	Explosions.
Other Pressure Vessels—						
Jacketed Vessels	84	770	854	2	84	3
Cylinders, Drying Drums, and Boilers (Steam Heated)	13	215	228	.....	13	.....
Air and Water Receivers	48	303	351	1	48	.....
Digestors	16	125	141	3	17	.....
Hot Tables:—Presses, Drying Tables, Cantilever Presses, Patching Tables ...	15	138	153	.....	15	.....
Autoclave Presses	.....	9	9	.....	1	.....
CO_2 Cylinders and Purifiers	3	99	102	.....	2	.....
Vulcanizers	34	162	196	1	33	.....
Calenders, including Mangles	16	96	112	.....	16	.....
Steam-heated Rolls	.....	2	2	.....	.....	.....
Desiccators	.....	7	7	.....	.....	.....
Retorts	13	69	82	.....	13	.....
Vegetable Steamers	.....	2	2	.....	.....	.....
Copper Coils and Pipe Heaters	16	101	117	.....	16	.....
Monteju and Crystallizers	.....	16	16	.....	.....	.....
Vacuum Vessels	.....	8	8	.....	.....	.....
Economisers	1	7	8	.....	1	.....
Steam Separators	2	2	4	.....	2	.....
Stills	.....	17	17	.....	.....	.....
Sugar Driers	.....	2	2	.....	.....	.....
Sterilizers	.....	1	1	.....	.....	.....
Oil Receivers	1	1	2	.....	1	.....
Superheaters	.....	2	2	.....	.....	.....
Stout and Wine Butts	.....	58	58	.....	.....	.....
Steam-heated Vessels	10	83	93	.....	10	.....
Coolers...	1	20	21	.....	1	.....
Total	273	2,315	2,588	7	273	3
Total	693	5,008	5,701	47	691	6

Boiler Regulations.

During the year the Minister granted eight certificates of approval to inspect boilers, &c. One hundred and eighty-seven certificates were in force at 31st December, 1922. One hundred and eighteen accredited inspectors are located in Sydney and suburbs, thirteen in the Newcastle district, and fifty-six in country centres.

Seven thousand four hundred and fifty-two reports, in connection with the inspection of steam boilers and other pressure vessels, were lodged by accredited inspectors as follows:—

	Reports received.		
	Boilers.	Other Pressure Vessels.	Total.
Prescribed Reports:—			
First Inspection with specification cards	420	273	693
Reinspection	2,693	2,315	5,008
Total	3,113	2,588	5,701
Non-prescribed Reports:—			
Internal	785	244	1,029
External	178	544	722
Total	963	788	1,751
Total	4,076	3,376	7,452

An explosion from the boiler of a portable or agricultural engine temporarily installed at a farm resulted in one person being instantly killed and another injured in both legs. At the coronial inquiry the user of the boiler gave evidence that he was engaged under contract cutting chaff at the time of the explosion, also there was nothing in the appearance of the boiler to indicate to him that the boiler was dangerous. The portable was loaned to the user by its owner. The operations carried on were such as to permit of the application of the Boiler Regulations. The owner of the engine admitted the boiler had not been inspected or tested since it had been his property, a period of over four years, neither had the user caused the necessary inspection to be made and a safe working pressure determined. On inspection after the explosion it was found that the firebox crown had given way entirely on three sides, forming an opening into the boiler of 3 ft. 5 in. by 2 ft. 5 in. The crown plate had evidently first failed above the fire door, along the seam where it was grooved, to an extent which caused the severance of the crown sheet from the vertical plate; as a result the crown sheet was then torn along the two sides of the firebox. The cause of the grooving in the crown sheet was shown to be a defect in the design of the boiler, in that the

crown

crown girder stays were much too short to find a proper abutment over the vertical plates of the box, hence grooving was set up by the continual bending of the crown plate when under fluctuating pressure. Although the boiler was in a very dilapidated condition in other respects, the immediate cause of failure was undoubtedly due to the cause mentioned. Had proper inspection of this appliance been made as required by the Boiler Regulations it is reasonable to suppose the explosion would not have occurred.

For failing to cause the prescribed inspection of the boiler the occupier of the factory—in this case the user of the portable—was, upon pleading guilty, fined £10, with 18s. costs.

An explosion of another portable type boiler occurred, fortunately without loss of life, though two men received minor injuries. Upon examination of the boiler by a Departmental officer it was found that its condition was such that no safe working pressure could reasonably have been allocated prior to the mishap. The fact that the boiler was carrying between 70 lb. and 80 lb. pressure per square inch is remarkable in view of the condition of the firebox plate, which in parts was found to be less than $\frac{1}{16}$in. thick, originally $\frac{6}{16}$in. thick; it was ascertained also that the water-space stays were wasted almost right through. When the explosion occurred the whole firebox crown collapsed, and it was seen that the flanging was extensively grooved, the metal being but the thickness of paper. It was at this part where the tearing of the plates apparently commenced. No inspection had been made of the boiler, and the factory was not registered. The owner was later proceeded against on these two counts, and was fined in each instance.

The explosion of a loco. type boiler attached to a log-hauling plant in use in a North Coast timber district resulted in the death of the engine-driver. The boiler had been installed in connection with the plant for some two years. The evidence given at the coronial inquisition indicated that the boiler had not been inspected for a period of two and a half years prior to its explosion, at which time it was in use and inspected in Western Australia. An examination of the exploded boiler showed that failure was due to extensive grooving of the shell-plate at the longitudinal lap-joint near the smoke-box end of the boiler. At the time of the explosion this plate opened up along the grooving, stripped completely from the boiler through its whole circumference, tearing through the line of rivets at both edges, and was thrown a distance of 50 yards, landing in the form of a flat plate. The boiler itself was, as the result of the explosion, projected into a creek some 15 yards from its installed position.

It has previously been reported that the present controlling statutory authority regarding the safe construction, use, and maintenance of steam boilers and other pressure vessels leaves much to be desired, and presents opportunity for gross irregularities, which the community as a whole, and boiler owners and users in particular, might be expected to be reasonably protected against.

The foregoing steam-boiler explosions also emphasise again the need for a comprehensive Boiler Inspection Act upon lines similar to the statutory provisions existing in the other Australian States—New South Wales alone being in the unenviable position of having inadequate enactments in this regard.

An accident occurred at a refrigerating works, causing the loss of the life of an engine-driver. Prior to the works commencing operations, and following the usual practice, a fireman opened the blow-down cock of a boiler to blow out some of the water; whilst so doing the blow-down pipe, which was underground, and below where he was standing, burst. He failed in his attempt to close the cock and left the stokehold to get bags to cover his hands and to get a lantern to enable him to see through the flying steam and mud, which prevented the electric light penetrating sufficiently. On the way he mentioned the incident to the engine-driver, and on returning with a lamp had to go back to the engine-room to get some matches from the engine-driver; there he found the latter in a seriously scalded condition, attempting to blow the alarm whistle. It appears that the engine-driver, after being advised of the trouble, went round to try and close the blow-down cock, but fell into a hole full of boiling water and mud caused by the escaping steam and water. After receiving medical attention the engine-driver was conveyed to the hospital, but shortly after expired. The engineer had a narrow escape, sustaining severe scalds, having also fallen into the hole, but the fireman with him, however, pulled him out. At the inquest the Coroner returned a verdict of accidental death, and added that no blame could be attached to anyone.

Three copper jacket pans exploded during the year, without injury to any person, and investigation in each case indicated that the vessels were working under excessive working pressures. The nature of the respective collapses was identical, and steps, where possible, have been and are being taken to prevent similar mishaps. Departmental investigation into the strength of copper indicates that the strength resisting qualities appear to have been overrated. The elastic limit has been found to be the most important factor, and the Departmental Engineer has determined that the working stresses on copper in vessels working at a temperature above that of the atmosphere (such as steam jacketed pans) and cold vessels (such as CO_2 generators) shall not exceed 3,000 and 4,000 pounds per square inch respectively. No objection has so far been lodged in this connection.

An instance of the serious consequences attending the lack of a periodical and thorough inspection of even small appliances operating under pressure was evidenced by the cover of a "regulator," attached to a CO_2 cylinder installed in a Sydney factory being blown off and breaking one arm of an employee. The cylinder containing the CO_2 gas, pressed to about 1,100 pounds per square inch, was in use for charging carbonating cylinders with the gas and a liquid to a pressure of 150 pounds per square inch. To the former cylinder was attached a safety device known as a "regulator" made of gunmetal, and combined a safety valve and pressure gauge; its function was to prevent the pressure in the cylinders exceeding that desired, viz., 150 pounds. In form the "regulator" was roughly a hemisphere 3 inches largest diameter, to which were cast bosses to receive connections, a 3-inch opening in the device being closed by a screwed cover. Investigation after the accident disclosed that the screwed cover had some time previously become very loose in the shell. Instead of replacing the defective "regulator" with a new one, an attempt had been made to roughly solder the cover to the shell. The repair was wholly inefficient, and the cover was blown off, and the injury above referred to resulted. Further investigation disclosed also that the safety valve had set fast in its seating, and evidently had not functioned for some considerable time. This valve should have operated at 150 pounds per square inch, but under test it required a pressure of 450 pounds per square inch to move the valve.

Mr.

Mr. Superintending Inspector Armitage reports :—

Registrations.—The most important registration during the year has been that of a very large engineering firm at Regent Park. The firm are well known all over the Empire, their products being installed in some of our warships and in some of our greatest factories. They have erected up-to-date and well-finished buildings with concrete floors, and have provided showers, wash-basins, &c. In the same locality is a large factory, in which our Railway Commissioners have some of the rolling stock constructed by contract. This factory is quite the reverse of the one just described, for the large buildings of this factory have been constructed of damaged and second-hand galvanised iron, no provision being made for floors, the work being carried out on the virgin earth. I had occasion to tell them in one large department to re-roof the place, the roof being in such a bad condition. I would here draw attention to the fact that when a man starts for himself in a small way and finds that his business expands very rapidly, he must consider every penny of the capital to be expended in the buildings, therefore, it is found that many factories have been built which do not comply with the regulations, but it would involve closing down the works on account of the expenditure, people having no reserves to work on.

Sanitation.—That part of the Act dealing with sanitation and cleanliness needs very careful watching. Occupiers seem to forget that limewash is used as a disinfectant. If the factory looks in any way clean they let it go on from year to year, instead of lime-washing every fourteen months as the statutory requirement.

Ventilation.—I am sorry to say that some architects do not pay sufficient attention to this important matter. They apparently consider that a few air bricks distributed in the walls in the vicinity of the ceiling is all that is required, overlooking the necessity for additional ventilation near the floor level. This provision allows for changes and movement in the air, &c., though the doors and windows, in inclement weather, may have to be closed. In several new factories I have insisted upon inlet and outlet ventilation as above, with very satisfactory results.

Accidents.—My district has been fairly free from serious accidents during the past year. A fatal accident occurred in a bakehouse, by poisoning from carbon monoxide. This was caused through lack of ventilation. The damper of the new oven had been closed, the heating being applied by means of a coke fire. The occupier himself was poisoned, and died in a few minutes after being overcome. Great attention is being given in England to this deadly poison in the industrial world. The present oven, as now constructed, has ventilators provided over the door of the oven so as to carry all fumes outside the bakehouse, and is working satisfactorily. The oven was constructed by a Victorian firm, and I pointed out to them the weakness in their construction, viz., that directly outside the door of the oven the walls should have a cavity so as to carry off any fumes from the oven when the door is open. This they promised to do and said they will adopt it in all their new ovens. Another popular means of making pastry, now, is by means of a rotary case oven, which can be seen in most of the shops in Sydney. Care should be taken that a sufficiently large hood to cover the oven is provided, leading to the outside air.

Fencing of Machinery.—The laundry people are quite reconciled to the fact that they must provide self-locking devices on the heads of their hydro-extractors, and the many devices now used are very ingenious and in some cases very satisfactory. In some factories there is still the idea that a piece of piping run across the side of a fly-wheel securely fences every part of that part of the machine, but in every case where the fence is less than 20 inches away from the fly-wheel it should be filled in with stout wire.

Mr. Inspector Armstrong reports :—

Registrations.—New registrations generally were confined to small factories, although two large pottery works have removed their plants to my district, where fine well-lighted and well-ventilated buildings have been erected for them. In addition to these, an established firm has greatly enlarged its premises for the treatment and preparation of peanut oil.

Structural Conditions.—I found only one instance where it was necessary to instruct an occupier to considerably improve the structural conditions of his premises, and the desired improvements were completed without any delay.

Sanitation.—It was necessary for me to draw many occupiers attention to Regulation 12, which specifically deals with cleaning windows and lavatories, especially in the smaller factories, where cleaners are not employed.

Fencing of Machinery.—This important factor has received the attention it merits, and only in very few instances has any opposition been shown to suggestions of safer working methods. On the other hand, many occupiers have asked for advice on later type guards, as they become known, and are quite willing to discard the old ones and replace with the new.

Fire Escapes.—With few exceptions the fire escapes have been satisfactory. I found in one instance however, that two sheets of galvanised iron had been nailed across the escape to keep the sun off the employees. On being pointed out his liability, the occupier immediately removed the obstruction.

Accidents.—Only a comparatively few number of accidents have occurred in my district during the year, the most serious being caused through an inexperienced operator cleaning her machine, a "strong box," whilst in motion. Whilst cleaning the underneath portion of the rollers, her hand was drawn in and crushed to such an extent that it was necessary to amputate four of her fingers.

Bakehouses.—Generally, no complaint could be found with most bakehouses in the district.

Certificates of Fitness.—I have warned most occupiers of their obligation under Section 45, and do not doubt that they will heed the advice. At a rope and twine factory, where many juveniles are employed, three convictions were obtained for apparent defiance of the Act, the occupier having been warned both verbally and in writing on previous occasions.

Mr.

Mr. Inspector Davis reports :—

Registrations.—The number of new registrations for the past year was slightly less than for the preceding twelve months. The new registrations applied mainly to small establishments.

Structural Alterations.—In several instances the occupiers of factories found it necessary to make additions to their premises to cope with expanding trade. The alterations, when completed, were found to be satisfactory, no doubt occasioned by the fact that employers favourably considered modern conditions prior to commencing the work.

Sanitation.—Generally the sanitary arrangements have been found satisfactory.

Fencing of Machinery.—Constant attention is required for the efficient fencing of dangerous machinery. Infrequently, fortunately, the operator removes a guard (or position of same) for some purpose, and fails to replace it before putting the machine in motion; such neglect is sometimes responsible for an accident happening to some employee not necessarily the machinist.

Fire Escapes.—Where required, alternate means of escape in case of fire have been provided. In a few instances it was necessary to issue instructions to the occupier to remove obstructions from the passage ways for the safe using of the escape.

Overtime.—Notice to work overtime was given in several instances; but on one occasion only was it necessary to furnish a report relative to the working of special overtime for the purpose of meeting the exigencies of trade.

Bakehouses.—Fairly satisfactory conditions were maintained in this class of factory. Instructions issued consisted mainly in limewashing of the factory.

Accidents.—Many minor accidents were reported, which, upon investigation, were found to have happened through carelessness. An accident occurred through neglect in maintaining a guard in an efficient state, an apprentice having three fingers severed by the back of a circular saw. Lockjaw developed, and he died some days after meeting with the accident. This deplorable accident would have been averted if the foreman of the factory had observed his responsibility by recognising, in the first instance, the importance of keeping the riving knife affixed to the circular saw. The inquiry into the cause of death conclusively proved that the accident would not have occurred if the riving knife had been affixed as aforesaid. A prosecution was successfully instituted against the firm.

Certificates of Fitness.—A few occupiers failed to obtain certificates of fitness for persons under 16 years of age before permitting them to commence work in the factory. In many cases this failure was probably due to the fact that they had occupied premises for factory purposes for the first time.

Mr. Inspector Dunleavy reports :—

Registrations.—A number of factories was registered in my district during the year, but the majority of the places were small, and many of the registrations were merely changes of occupiers.

Sanitation.—The majority of occupiers keep their factories in a cleanly condition, but there is still a minority to whom it is necessary to issue instructions.

Fencing of Machinery.—It is still very necessary to give constant attention to the guarding of machinery, as some occupiers do not insist that guards should be kept in proper position when provided.

Fire Escapes.—Owing to the large number of old buildings used as factories in a portion of my district in the heart of the city, the question of fire escapes has received my constant attention.

It is almost impossible to have modern fire escapes constructed in some of the buildings, owing to their design, &c., but the next best thing has been done. Acting in co-operation with the fire brigade officers, inspections have been frequently made, and the closest attention has been paid to them, with the result that many escapes have been repaired and painted during the year.

Accidents.—A number of accidents has occurred during the year, the majority of them at dangerous machines, but fortunately none had fatal results.

One accident occurred at a biscuit factory, through the escape of carbon monoxide fumes. The factory had just recommenced operations, after an overhaul, during which the flues had been thoroughly cleaned. After the overhaul the ovens were relighted, and, under ordinary circumstances, baking would not have commenced for four or five days, but, owing to the rush of orders, baking was commenced within twenty-four hours, thus necessitating the forcing of the ovens to get up sufficient heat to commence baking.

A day or two previously it had been raining, and as the company relies for fuel on a daily supply of coke, it is assumed that wet coke was used to stoke the ovens, and that owing to its wet condition carbon monoxide gas was generated, and escaped through the dampers, or cracks of the brickwork, spread over portions of the factory, and was inhaled by a number of girls working on the ground and first floors.

Twenty-nine girls received medical attention, and thirteen of them were unable to return to work within forty-eight hours.

Bakehouses.—The majority of the bakehouses were kept in a satisfactory condition, except that the usual notice to limewash had to be served on a number of occupiers.

Certificates of Fitness.—Some occupiers are very careless in respect to obtaining certificates of fitness. In a number of cases I found it necessary to issue instructions to occupiers to obtain certificates of fitness for youths under 16 years of age.

General.—There have been vast extensions and improvements to some of the factories in my area during the year, particularly in the knitting, motor-body building, and pressed metal trades.

Mr.

Mr. Inspector Henstock reports :—

From January to June I was in charge of Broken Hill district, and was then transferred to metropolitan area, taking over part of City and the Illawarra suburbs.

Registrations.—Several new factories were registered, and a number of re-registrations was also made owing to change of occupiers. Recommendations for improvements were generally carried out in satisfactory manner.

Sanitation.—In the country and parts of the Illawarra suburbs the pan system was in use, which leaves much to be desired. In some instances septic tanks have been provided, but a general sewerage system in the suburbs is an urgent necessity.

Fire Escapes.—In the City area it was found necessary in several factories to construct additional means of escape owing to extensions of the factory premises. Instructions were also issued for additional fire precautions.

Fencing Machinery.—Constant attention has to be given to ensure that fencing is properly maintained, and the various safety devices provided, particularly with emery-wheels and wood-working machinery.

Accidents.—No fatal accidents occurred. Most of the accidents reported were of a minor character In some instances devices were able to be constructed as a means of ensuring more safe working.

Bakehouses.—General attention has been given to ventilation and cleanliness. The extension of business in the suburbs has been the means of enlarging the premises and the construction of new factories with modern machinery.

General.—Whilst there was an expansion in the roof-tile making industries, also woodworking, there was a tendency to slackness in most of the other industries. In the meat preserving industry one large factory had to close.

Boiler regulations have received special attention.

Mr. Inspector Jackson reports :—

The district allotted to me for this year comprised part of the City, Balmain, Rozelle, and from Merrylands to Douglas Park on the Southern line.

Registrations.—Many registrations of factories were made in this district. One of the most up-to-date factories in the State—a large clothing factory—was registered in the City. The whole of the large top floor is used as a dining-room and kitchen, where meals are provided for the employees at a nominal cost. A knitting and laundry apartment are included in this factory. The lighting and ventilation are all that could be desired.

Structural Conditions.—I did not find it necessary to recommend any structural alterations in this district.

Sanitation.—In several instances it was found necessary to issue instructions for the thorough cleaning of factories. Where the sewerage system is in operation little trouble has been met with in regard to lavatory accommodation, but where the pan system is in use orders to disinfect have been frequently given.

Fencing of Machinery.—Generally speaking, fencing has been well maintained. I found that in many cases emery-wheel guards had been removed by the employees, who neglected to put them back in their proper position.

Fire Escapes.—Several fire escapes were completed and approved of during the year.

Accidents.—One fatal accident occurred at a woollen mill, where an old man attempted to hold a belt off a revolving overhead shaft, and gripped both parts of the belt with his right hand, with the result that the belt caught round the shaft and took his right hand and arm with it, tearing the arm out of the socket. Other accidents of a comparatively minor nature have happened.

Bakehouses.—I have had very little trouble with the bakehouses, most of them being kept in a cleanly state and frequently limewashed.

Certificates of Fitness.—In most cases this regulation has been well observed by the occupiers, but in a few cases I have had to draw the attention of employers to the necessity of obtaining certificates of fitness for their employees under 16 years of age.

Mr. Inspector Lynch reports :—

During the year under review my district included the Chippendale area of the City, and the municipalities of Redfern, Alexandria, and Erskineville.

Registrations.—New registrations included a number of large establishments, and indicated a substantial growth of industry in the district.

Structural Alterations.—It was found necessary in a number of cases to enforce the carrying out of structural alterations to bring premises up to the standard required, and in numerous cases structural improvements were effected voluntarily at my suggestion.

Fencing of Machinery.—A considerable improvement was made in the fencing of machinery. In many cases it has been constructed of tubular steel posts and rails with strong woven wire to enclose the spaces. In every case the occupier was pleased with the result, as it gives a permanent fence and adds much to the appearance of the factory.

Fire Escapes.—Several new fire escapes were constructed, and in one case where structural alterations necessitated the temporary removal of the escape special temporary provision was insisted upon.

Accidents.—No fatal accidents occurred during the year, but several involving the loss of portions of fingers were reported. *Bakehouses.*—

Bakehouses.—Improvements were made in a number of bakehouses, including the removal of wooden floors and the substitution of concrete. Registration of one place proposed to be used as a bakehouse was refused on the grounds of its unsuitability for the purpose.

Certificates of Fitness.—The law in regard to certificates of fitness for the employment of junior labour was well observed.

Overtime.—Breaches of overtime clauses were not many, but in a few cases it was found necessary to prosecute offenders in order to compel strict observance of the law.

General.—New factories in the district included a large factory for the manufacture of motor cars, one for the manufacture of oxygen for commercial purposes, several large engineering establishments, two large confectionery factories, and a number of smaller factories. A large engineering shop, which formerly employed several hundred men, re-opened after having been closed down for more than two years.

Mr. Inspector Ogilvie reports:—

Registrations.—During the year a large number of factories were registered in my district, and good provision has been made for sufficient light and ventilation.

Structural Alterations.—On a visit to a factory I investigated the condition of a box gutter. On examination portion of the gutter was found to be in such a condition that it allowed the rain water to find its way down the inside wall of the factory. The gutter was also of faulty construction. A Minister's notice was served on the owner of the factory to carry out the necessary structural alterations, and as he failed to comply with the notice, proceedings were instituted. The alterations were subsequently made.

Sanitation.—The power given under the Act in regard to light, temperature, and ventilation has permitted, in the registration of new premises, of very satisfactory conditions being provided. Old premises still in occupation have been very much improved.

Fencing of Machinery.—Careful attention was given to the requirements of the Act in this direction. On my visits to the factories I found, with few exceptions, that the Act was being observed in a satisfactory manner.

Accidents.—A number of accidents happened in which the persons injured lost parts of fingers. A male employee was working a circular saw, the guard being tied up. As he was finishing the job his hand slipped and came in contact with the teeth of the saw, resulting in the loss of four fingers to the knuckles.

A female employee was working a calender machine, and the guard, not being in proper working order allowed her hand to come in contact with the rollers of the machine. Proceedings were successfully taken against the occupier.

Fire Escapes.—A number of fire escapes were erected at factory buildings during the year and passed as satisfactory by the Chief Officer of Fire Brigades.

Certificates of Fitness.—On many occasions I had to direct attention to section 15 of the Act, which was carried out forthwith.

Mr. Inspector Pickering reports:—

Registrations.—A number of new factories has been registered during the year, most of which were engaged in manufactures of a general kind. Special mention may be made of one factory which makes paint from crude antimony, the process being mostly carried out by baking the ore in a specially constructed oven. Several engineering shops have been registered, some of which have been adapted to specialise in some particular article.

Structural.—Three or four factories were compelled to extend their present premises as their trade increased. When this work was being carried out the opportunity was availed of for the provision of good sanitation and ample ventilation.

Sanitation and Ventilation.—Sanitary conditions were generally well observed. Lime-washing had to be enforced on a few occasions. The dust nuisance had my attention at all times, and several small dust-exhaust plants were installed on my instructions. These mostly applied to polishing lathes and sand-papering belts and drums.

Fencing of Machinery.—This matter continually needs attention. It is noticed that guards for particular types of machine are almost standardised. The power-press has advanced another stage to safety by the application of the double-lever independent automatic guard. Special mention is made of the automatic guard as applied to reversible roller machines, such as dough-brakes and caramel rolls, which is of recent design. This guard by its action makes this type of machine almost fool-proof, as access cannot be gained to the intake side of the rollers while they are in motion, also the machine cannot be started unless the guards are in position.

Fire Escapes.—The erection of two fire escapes was found necessary during the year.

Accidents.—Several accidents occurred which needed careful investigation. They were most frequent on the power press and circular saw. One fatal accident occurred at a saw-milling establishment. The sawyer found it necessary to remove the guard from the circular saw on account of having to break down large logs. When he had completed this work he neglected to replace the guard. When "ripping" a "shaken" piece of timber it splintered, a large piece flew forward from the back of the saw and struck him in the abdomen. He was taken to hospital and died the following day.

Bakehouses.—Close observance as to cleanliness has been given by me to this class of factory, but occupiers generally have given little trouble.

Certificates of Fitness.—Two or three cases came under my notice where boys were working in factories without certificates, but the time worked did not extend over more than four or five days.

General.—There is still a slackness of trade in some industries, particularly the iron trades. Other industries, such as clothing, are almost back to normal.

Mr.

Mr. Inspector Young reports :—

Registrations.—I dealt with a large number of new registrations during the year, mostly changes in ownership. There were no new industries started in my district.

Structural Alteration.—In several factories in the city portion of my district I directed the installation of fire escapes, and in two instances additional provisions to existing escapes. In several premises additional W.C. and lavatory accommodation were ordered.

Sanitation.—It is found necessary at all times to give attention to the limewashing and general cleansing provisions in this section, and many orders were issued to employers to comply with the regulations.

Fencing Machinery.—I found no trouble with employers in observing my necessary instructions for the guarding of machinery. Employees in many cases are careless in maintaining guards which are provided, and I had on several occasions to speak to them of their neglect in this respect.

Accidents.—The majority of accidents were of a minor character, with the exception of one in a joinery works, the employee losing his hand in a four-sided planer. The machine was guarded, but in reaching across the top of the machine to adjust the pressure rolls, his hand came in contact with the cutters. There were three serious accidents to young women in laundries at the calender rolls. In two cases the employees attempted to take folds out of the cloth going round the rolls while in motion, their hands being drawn in. One suffered a crushed hand and the other lost two fingers. In another case the feeding apron broke and went round the rollers. As it did not come out at the back of the machine, the operator called to other employees to assist her. They held the guard up, and one, in trying to push the cloth through the rollers while in motion, had her hand drawn in, and it was so badly burnt and crushed that it had to be amputated at the wrist.

Bakehouses.—I found these premises generally satisfactory.

Certificates of Fitness.—In a few cases I had to draw the occupiers' attention to the necessity for their obtaining the necessary certificates for their employees under sixteen years of age.

Miss Senior-Inspector Golding reports :—

During 1922 the work in my district was not so arduous, as warnings and notices served in 1921 had good results.

Registrations.—This year I dealt with more new registrations than during the previous year, most of them in connection with premises on a large scale, and up-to-date in every way.

The building of one boot factory and remodelling of an old one owned by the same company cost about £50,000.

Through both buildings a new system of sprinklers was installed, at a cost of over £2,000.

In another suburb an old building was purchased by a city firm. The cost of building and land was £20,000, the remodelling about £3.000, with an additional cost of installing sprinklers £1,100.

A very fine printing factory was built at a great cost for land and building. For light, ventilation, and sanitation it is practically perfect.

Many old buildings were brought up-to-date, and more modern conveniences installed.

One of these is now registered as a silk-weaving factory. The material turned out is quite equal to any of the imported silks. This is the only factory of the kind in Australia.

A portion of this factory is set apart for weaving cream and white woollen shawls of various beautiful designs, also quite a new industry.

Amongst other registrations covering new industries were a wireless plant, a mat factory, making door and bath mats from waste leather from boot factories, and a paper match making factory.

Structural Alterations.—Satisfactory alterations have been carried out in a number of factories. In most cases these alterations were in connection with Regulations 15 and 16 (Closet and Lavatory Accommodation).

Sanitation.—This is a matter requiring constant supervision *re* number of wash-basins and lavatories, and seeing to the cleanliness of same.

In Katoomba and Leura I found in several places both sexes using the same lavatories and wash-basins, but in every case when I served cards to provide separate accommodation, instructions were complied with.

Overtime.—If overtime is an indication of progress, then many trades have had a prosperous year, particularly in the boot trade and printing factories. Excessive overtime was worked in several.

In one case particularly (a boot factory) very excessive overtime was worked—over thirty times in the year, and up to nine hours.

In another factory girls were worked every night in the week, all day Saturday and Sunday—nine hours overtime on Saturday and Sunday. In both cases proceedings were instituted against the occupiers and penalties were imposed.

Several firms made application for extension of overtime, which were granted.

Certificates.—On many occasions I have found children under 16 years of age employed without having obtained the necessary certificates of fitness. However, the certificates were obtained immediately after my visit.

Many applications were made under section 40. On investigation I found the families in such distress that, although I am not usually inclined to favour the granting of these permits, I felt compelled to recommend them.

General.—Work for women, girls and boys has been good. Of course, there are women out of employment, most of whom are unskilled.

Welfare work has made rapid strides the past year. In one large factory a lady doctor is engaged at a large salary, to attend to the employees. Her time is fully occupied, as there are upwards of 500 female employees. A rest room is provided, and a card system is kept for every employee, showing her health, sickness, &c. In this same factory there is a bonus system. Good results are obtained without speeding up.

Another company has established a fine home at the seaside, where their girls can go for a holiday. Board, lodging, and laundry are provided for at 10s. per week. These girls are given one and two weeks off on full pay, according to the period they are in their employment.

In a large suburban factory a system of saving has been established. On pay-day a clerk stands by and from 5s. down to 6d. is collected from every employee. These amounts are banked in their own names. They are not permitted to draw out any money till a week before Christmas (only in case of trouble). Then the management add 5½ per cent. to the savings of each employee, from messenger to foreman.

They also have a sick fund, subsidised by the management.

Conditions, on the whole, have much improved in regard to factory management, and, needless to say, there is more contentment prevailing.

Miss Senior-Inspector Harriott reports :—

Registrations.—A number of re-registrations of factory premises was dealt with during the year, and seven new buildings were erected for factory purposes.

A type-founding factory moved from an old building to a new up-to-date one. As the work carried on includes the handling of lead, this is a matter for congratulation.

Structural Alterations.—Several minor structural alterations were carried out during the year.

In connection with a grocery packing factory, which has been housed for many years in an old-fashioned building in the city, alterations and extensions are now being made to meet more modern requirements.

Sanitation.—Many factory owners, particularly those in a small way of business, do not attach enough importance to the daily cleaning of factories and attention is needed to keep them up to the necessary standard. This is especially the case in some of the small confectionery factories.

Overtime.—Extensions of overtime were granted to three printing firms and one cigarette factory.

On the whole, however, the overtime worked was considerably less than usual, owing to a general depression in trade.

Certificates of Fitness.—Unfortunately, permission to work in factories was granted to more than the usual number of children under 14 years of age.

In most cases the necessity arose from the fathers being out of work.

Nineteen cases were reported on. In one instance an application was made on behalf of a child who had been granted exemption from further school attendance. On inquiry into the matter it was proved that she was only 12 years of age. She was an habitual truant from school, and had been trying for some time to evade the law and get work in different factories. It is hardly necessary to say that this application was refused.

General.—Work in many factories, especially those engaged in manufacturing women's clothing, was slack during the year. Some small factory owners found it difficult to keep their establishments going.

In spite of this slackness there did not seem any serious amount of unemployment among experienced women workers.

Since the wages for beginners in such skilled industries as dressmaking and millinery have been raised it is no uncommon thing for employers to say that it does not pay them to engage inexperienced workers, with the result that there is a growing shortage in the number of skilled workers.

Welfare Work.—In one large factory where a matron and trained nurse are employed a tutor has been engaged to give lessons in general educational subjects to boy apprentices for one hour each day in the firm's time. I am told that the lessons are appreciated, and that good work is being done.

Miss Inspector Brown reports :—

During the year registrations in my districts were numerous, the majority being re-registrations of premises previously occupied, but several were for new factories, notably a large confectionery works, claimed to be the most up-to-date in the Commonwealth; another for the wool-spinning industry being replete with all requirements; and another for manufacture of electric-power motors—a new industry—the building meeting all requirements, and being situated in pleasant garden surroundings.

The re-construction of a central arcade has provided more up-to-date and commodious workrooms for occupiers with small industries, such as order dressmaking, millinery, &c.

Structural Conditions.—In some cases I found it necessary to have small alterations and additions made. In one large biscuit factory substantial additions of two floors are being erected, nearly the whole of one of which will be provided for the female employees as a dining-room, dressing-room, and matron's room, a welfare worker being installed to look after the girls generally. In other cases premises have been re-organised, and by additions and alterations brought more into conformity with the Act, tending to bring more comfortable working conditions for the employees. So many buildings occupied as factories, not having been built for such use, are unsuitable, and need frequent additions or alterations.

Sanitation.—Considerable effort is necessary to keep cleanliness and good order up to a reasonable standard. Some occupiers seem to consider that as long as the work is done, it is immaterial under what conditions, and neglect ordinary sanitary precautions necessary for good order. Fortunately, these are in the minority. In many factories now cleaners are regularly occupied on that work alone, and consequently conditions are much better maintained.

I found it necessary to recommend proceedings against an occupier of a knitting factory in the city for dirty and neglected sanitary accommodation—a warning had previously been given.

Overtime.—

Overtime.—A fair amount of overtime was worked under prescribed regulations, and in a few cases extensions of overtime were applied for, and granted. In some trades it was clearly shown that as additional employees were unobtainable, the working of overtime was compulsory.

Certificates of Fitness.—Generally speaking, I found the provisions of the Act fairly well observed *re* certificates. In some instances warning letters were sent; but the majority of employers require production of certificates before engaging employees, having realised the necessity for them.

Laundries.—The laundries in my districts maintained a fair standard during the year. In some cases orders for lime-washing were necessary, which were usually promptly carried out. The industrial regulation of this industry seems to have placed it on a better footing.

General.—During the earlier months of the year, in all industries covering women's work, employment was erratic, with the exception of stock-tailoring, which in some places was very busy; and in the printing industry; but later in the year increased activities were shown.

Miss Inspector Scobie reports:—

Registrations.—During the year 1922, four new and substantial buildings were erected and registered as factory premises within the city area under my supervision, and two of a similar nature in the suburban area.

One—in the city—of outstanding note, is a fine seven-storied structure, calculated to house 800 employees (750 women).

The premises are occupied by one firm, whose activities embrace several distinct industries. Comprehensive measures have been adopted to ensure the general comfort and well-being of all concerned, and a fairly complete system of welfare instituted. Prior to the completion and registration of this building, I brought under the notice of the firm the—in my opinion—inadequate protection against accident, afforded by the galvanised iron-piping, which served as handrails on the stairs.

The firm gave consideration to my suggestions, which resulted in the seven flights of stairs being effectively wire-netted.

All other registrations were of a routine character.

Structural Conditions.—Towards the end of the year extensive structural alterations were carried out in a municipal building, housing a great number of registered workrooms.

In an out-lying suburb extensions were carried out in connection with one substantial factory, practically doubling the original capacity.

Sanitation.—With the exception of one factory not connected with the sewerage system, wherein unsatisfactory sanitary arrangements were disclosed, and subsequently rectified, the standard maintained was fairly satisfactory.

Overtime.—Within the year I was called upon to investigate four applications for extension of overtime. After inquiry the permission sought was granted in each case.

Certificates.—The majority of employers I find give scrupulous attention to this regulation; occasionally one finds the exception.

General.—As one observes the gradual, but certain, expansion of industrial undertakings, it is gratifying to note that employers of labour are displaying an increasing anxiety to establish, where possible, welfare amenities for the benefit of those whom they employ.

As evidence in support of this statement, I might point to one factory occupier, employing fifty girls, who appealed to me for advice in connection with a "supposed" case of infectious disease. Suspicion centred on one employee, and the sifting of the matter was left entirely in my hands. I arranged for a woman doctor to accompany me to the factory. After tactful investigation, the suspicion was proved by the doctor to be groundless.

The firm then asked the doctor to accept the position of medical superintendent to the factory staff (both sexes). Subsequently the doctor accepted the position, and has since been carrying out the work of a medical missionary with beneficial results to employer and employed.

Miss Inspector Stuart-Robertson reports:—

In addition to completing inspections of all the factories in the Metropolitan District assigned to me, I also completed an inspectorial tour of Newcastle and district.

Structural Conditions.—A fair number of the factories leave little to be desired in structural conditions, but there is still much to be accomplished before the majority of buildings used as factories are anything but a source of worry to the inspector.

Registration.—I have attended to a fair number of registrations, but there is nothing of interest to report in connection with them.

Sanitation.—I have found the majority of occupiers very solicitous in matters under this heading, but others are quite the reverse.

I found a factory, where food was manufactured, in a very dirty state, and as the occupier failed to have the premises cleaned by the date mentioned in my order, he was prosecuted for breach of section 20 and fined.

The habit of sprinkling workroom floors with disinfectant, and not having the floors washed at reasonable intervals, is of frequent occurrence, and being most insanitary, as dust and other small particles gradually accumulate and adhere to the floor, has rendered regular supervision absolutely necessary.

Overtime.—A fair amount of overtime has been worked, but in only a few instances has there been a violation of the Act, and in such cases warnings have had the desired effect.

Applications for extension of overtime were granted to three large printing firms to enable them to complete overdue orders.

Certificates

Certificates of Fitness.—This matter has received attention from occupiers and only isolated breaches have occurred.

General.—An additional floor was added to a large hosiery factory, and extensive machinery installed for the treating of the raw material and spinning of silk yarn. The females employed find this work most interesting. Employment of females generally has been well maintained, hosiery and underwear knitting factories alone employing quite an army of women and girls.

The number of industries in which females are employed is also increasing.

Mr. Senior Inspector Huntley (Newcastle) reports:—

The severe industrial depression which fell upon this district towards the end of 1922 grew in extent as the new year progressed, and it was found necessary to establish a separate office in Scott-street, Newcastle, to control the Labour Exchange section of the Departmental activities. Following the total cessation of productive operation at the Broken Hill Proprietary Company's steel works at Port Waratah, where about 5,000 men were at work in November, 1922, came the closing of other dependent and large works in the vicinity, and many smaller establishments throughout the district. More than 6,000 persons registered themselves during the year as unemployed, and it was generally estimated that about 8,000 men, in all, were actually unemployed. No work was available save that provided by the Federal and State grants, but as this was reserved in the main for returned soldiers, it had only a small reductive effect. Distress became acute, and food orders to the value of nearly £1,000 sterling were issued weekly. A large number of men left the district, and those that remained were forced to eke out a precarious existence awaiting the only practical solution—the resumption of work at Port Waratah. At the time of writing it is reported that the Broken Hill Proprietary Company were arranging to recommence production, and it is hoped that the blackest industrial depression ever experienced in this district has been ended. As may be anticipated, the Newcastle officers had a very strenuous time, but sought to meet and despatch difficulties as they arose. The whole of the staff engaged in unemployment duties worked well, and gave all possible assistance. After thoroughly organising the Labour Exchange section, I was enabled in July to resume my inspectorial duties, which had, perforce, been rudely interrupted.

Registrations.—No new industries were registered in my district, although several changes in ownership of established industries were effected, and I followed my custom in such changes of insisting upon the provision of the most modern conditions.

Structural Alterations.—The tendency towards modern buildings and effects was well maintained, and I found employers very ready to discuss and introduce any recommended benefit towards their employees' comfort. In spite of the prevailing industrial distress, building operations were well maintained, and a few more of the old galvanised iron workshops were replaced by brick structures. In addition, several new premises in brick were erected, and the standard of factory buildings in this district has been distinctly improved.

Sanitation.—The extension of the sewerage system to several additional suburbs has greatly helped in advancing the sanitary conditions therein, and it will not be long before the whole of the southern and western districts within 5 miles of the Newcastle Post Office are similarly served. In the country where no sewerage system obtains, a good deal of attention was required, but I found the local officers ready to co-operate towards the general good, and noted a distinct advance upon last year's conditions. It is, of course, necessary to gain the free co-operation of the employees to achieve wholly satisfactory results, and in this particular it is pleasing to also notice an undoubted improvement. With patience and constant attention a wider circle of co-operators will be obtained with correspondingly satisfactory results. The cleansing of premises was well maintained, and few instructions were necessary.

Fencing.—Special attention was paid to this important feature, and I am glad to report a very satisfactory advance. The fences and guards throughout my district were, with one exception, quite in conformity with the Act. The exception noted was removed by prosecution, the maximum penalty being inflicted. As usual some difficulty was experienced with sawyers, regarding the required continual use of the riving knife at the back of the circular saw doing ripping work, but after discussion and demonstration of its complete practicability in nearly all circumstances, the opposition was overcome, and the riving knife is now in better favour than formerly. In one case I found it necessary to recommend a prosecution for repeated failure to use the knife, with satisfactory results. My belief in the importance of obtaining the co-operation of the employees working at machines or about mill-gearing is still strongly held, and is constantly put into practice. Being able to personally demonstrate upon any particular machine gives me a decided advantage, and has proved of tremendous value in my work. In my opinion, insufficient use is made of notice boards in factories—constant reminders of the need for safety-first; the merely verbal instruction by the occupier, or his foreman, has proved totally inadequate. Disposition of machines is a feature which well repays close attention, and I have proved occupiers to be always ready to listen to practical advice respecting their plant. Apart from the humanitarian aspect, the employers liability for compensation, after accident, is an impulse towards safety, and opens the door of improved and safer method.

The boiler regulations of the Act had my careful attention, and reports were made where necessary.

Accidents.—There were singularly few accidents in my district during the year, and I attribute this satisfactory result to constant discussions with operators at dangerous machines, and the prominent exhibition of warning notices.

Fire Escapes.—These very necessary adjuncts had special attention, and I did not find any cause for complaint.

Overtime.—A limited amount of overtime was worked in the clothing industry, and I found the payments for overtime and tea money to have been properly made and recorded.

Certificates of Fitness.—Care was exercised with respect to permits and certificates of juveniles, and no breaches were disclosed.

Bakehouses.—

Bakehouses.—A distinct improvement is shown, and even in small country centres the building standard is good, and the premises kept in very cleanly condition. A lengthy investigation was necessary in a Newcastle bakehouse, as the result of an industrial dispute as to the excessive heat in the bakehouse. After a full and practical inquiry, I reported that the bakehouse was well ventilated, and that my thermometer tests did not justify the complaint. In the city and suburbs new bakehouse premises have been erected and old premises renovated and enlarged—the standard is quite satisfactory.

Prosecutions.—It was found necessary to institute proceedings in a few cases, and satisfactory penalties were inflicted.

General.—Reviewing the year's work it may be safely said that the result of the many years' operation of the Act has been to strikingly improve the workers' safety and comfort, and with the marvellous advance in educative methods, acting conjointly, the progress made can be easily maintained and undoubtedly improved upon. It would greatly help if the Act was amended to give the Minister power to direct, by order, the statutory guard standards and requirements of each industry.

Mr. Inspector Clark (Newcastle) reports :—

During the year 1922 there was intense industrial depression throughout the Newcastle district. The closing down of the Broken Hill Proprietary Company's works at Port Waratah, with its subsidiary enterprises, displaced thousands of men from employment, and reacted throughout the whole of the area in small industrial plants.

Registrations.—Many of these were premises previously occupied and registered as factories. Changes of ownership and reconstitution of companies, necessitated new registrations. A new and up-to-date plant for Foggitt, Jones, Ltd., for the preparation of their products, was erected at Aberglassyn, West Maitland, during the year.

Structural Conditions.—Alterations and new premises are modernising these conditions. Extensive alterations to a bakehouse, including the installation of machinery and automatic ovens, costing over £5,000, has been a feature of the year in the district.

Fencing of Machinery.—Strict attention has been given to the provision of section 33 of the Act, and generally speaking, the necessity of securing adequate protection where dangerous machinery is in use, is recognised. Constant vigilance in inspection is, however, necessary, as many occupiers do not seem to realise that a duty is cast upon themselves to safeguard dangerous machinery, irrespective and without waiting to be directed so to do by the Inspector on his rounds of inspection. Attention has also been given to the improvement of the existing types of guards, with a view to facilitating the work performed whilst at the same time giving more adequate protection to the workers engaged throughout the industry.

Accidents.—Numbers of accidents have been investigated during the year, fortunately the major portion of them were of a minor character, some of them being of a non-preventable kind.

Fire Escapes.—No new fire escapes have been erected in my district during the year. The existing escapes have had observation, and are fairly well maintained.

Overtime.—Owing to the continued industrial depression throughout the year, the instances of overtime worked were few.

Certificates of Fitness.—The provisions of the Act in this respect have been fairly well observed, and in no instance was it necessary to enforce the provisions of the Act.

Bakehouses.—The standard has been well maintained, and special attention has been given to sanitation, cleanliness, and ventilation. The general upkeep with respect to premises in regard to all these matters, has been fairly good.

Prosecutions.—In a few instances occupiers were proceeded against for breaches of the Act, mainly for non-observance of section 33, where occupiers had displayed negligence and laxity in failing to provide safeguards after being specially directed so to do.

General.—The whole of the area covered by my district, extending to Werris Creek, on the north, has been regularly visited during the year, and the experience has been that regular and constant visitation is essential to ensure an observance of the provisions of the Act and Regulations.

Mr. Inspector Middlemiss (Newcastle) reports :—

Registrations.—A reflex of the acute local depression in the iron and steel industry was indicated by the fewer registrations than would normally have been effected.

Structural Conditions.—The standard generally tends to improvement. With reference to women workers particularly, it has been clearly shown that the industrial undertakings offering the better factory conditions are able to secure the most efficient and desirable type of labour.

Sanitation.—The conditions in the city portion of my district are generally satisfactory. In the country districts where no sewerage system exists, the obtaining of hygienic conditions is more difficult. In one case where I considered conditions to be unsatisfactory, new brick conveniences of modern design were erected, and with the co-operation of the employees effected a very satisfactory improvement. Septic tanks are being installed in increasing numbers, and in most cases, when properly used, are giving satisfaction.

Guarding and Fencing of Machinery.—In a previous report I made references to the difficulties of certain phases of this work. To overcome such difficulties, and particularly in reference to the larger factories, I have asked managements to consider: (1) Danger elimination as a continually active force in the policy of their organisations; (2) to place the consideration of such matters in the hands of some responsible

responsible officer, with a view to their departmental officers being clearly informed as to their responsibility, and the placing of responsibility on individual members of the organisation; (3) that the view be accepted with the co-operation of employees from the most to the least important, obtained either directly or reflexly (*i.e.*, by either reward or penalisation), in efforts directed towards danger elimination, is essential; (4) that danger should in every case be advertised rather than hidden, so that it may clearly be seen to call for attention, that (as far as is practicable and without interfering with necessary discipline) encouragement should be offered to any employees assisting such a policy; (5) that the subject be dealt with as one requiring consistent educational and publicity methods, and that such education can only be made effective by the conscientious and continuous efforts of those in authority; (6) that all employees, when engaged, be called upon to read and sign for a printed "Rules of the Factory" which, together with other instructions, would instruct them to observe all "official orders," *i.e.*, displayed notices, as personal instructions; (7) that at a usual manager and foremen's meeting every accident should be analysed, the responsibility for it apportioned, and means considered for the prevention of further similar ones.

The operation of such a policy has proved of value in obtaining a consistent attitude toward many of the difficulties inseparable from factory work.

Accidents.—A fatal accident occurred at a large works. Similarly to those occurring in 1921, and referred to in my previous report, it resulted from a lack of effective co-ordination between the operatives. Localised guarding is not necessarily effective in such cases. The active policy outlined under "guarding and fencing, &c.," in my opinion, suggests the most effective method of preventing such accidents. A large proportion of the accidents reported were of a minor character, and did not result in permanent disability. The largest works in my district were practically closed during 1922, and to this probably may be attributed that the number of accidents reported was less than normal.

Fire Escapes.—The few fire-escapes in my district were found to be in a satisfactory condition.

Bakehouses.—I found the bakehouses under my supervision to be generally satisfactory

Overtime.—The provisions of the Act were complied with in a satisfactory manner. Little overtime was worked, but when it was, due notifications were forwarded.

Certificates of Fitness.—I have found that the large works carefully observe the requirements of the Act. No breaches came before my notice.

General.—Commercial undertakings in Newcastle have suffered from unprecedented depression during the year, and the fact that the largest iron and steel works in the district has been entirely closed down for production during that period has been most severely felt in allied industries, both local and further afield. Fortunately, in view of a definite announcement that these larger works will recommence production early in the new year, there appears to be good reason to expect more prosperous conditions in the near future. Should these expectations prove to be justified, there is little doubt that the district will see the inception of many new subsidiary industries and greatly increased industrial activity.

Mr. Inspector McEvoy (North Coast District), Lismore, reports:—

Registrations, &c.—The number of registrations during the year was 133 and cancellations 130. The majority of the registrations was the result of change of occupiers; but there was a fair increase of new factories—chiefly in saw-milling and motor-engineering industries. The hydro-electric premises of the Dorrigo Shire Council were registered, and it is worthy of mention that the Council have the credit of being the first to establish an hydro-electric plant in New South Wales for purposes of trade.

Structural Conditions.—Factory premises, generally, are in fairly good order. Some old bakehouses are on the border-line of complying with the requirements of the Act and regulations, and I found it necessary to serve instructions on a few occupiers to repair floors, and also provide ventilators to rooms.

Sanitation.—The pan-system preponderates throughout my district, necessitating constant supervision. Unfortunately, there are a number of employees who do not assist employers in keeping factory premises in a clean condition, especially W.C.'s. On the whole, however, sanitary requirements are fairly well observed.

Fencing of Machinery.—I found it necessary to issue a number of notices to guard dangerous parts of machinery. The old, old story of, "I was just waiting for you to call to get advice about guarding," remains evergreen, and many profess not to have noticed the danger parts of machinery until same is pointed out to them by an inspector, and also some of the "old hands" in saw-mills are still prejudiced against saw guards, and only use same through compulsion.

Boiler Certificates.—In several instances where I noted that the boiler regulations were not complied with, the necessary action was taken.

Accidents.—It is pleasing to be able to again report that accidents have been few in number; further, that in no instance did investigation into cause of accident prove that injuries were the result of negligence to guard machinery. As in past years, the circular saw claimed most victims, and was responsible for the loss of tops of fingers in two or three instances. A girl in a confectionery works had her hand and arm severely scalded; her foot slipped on sawdust on floor, and in attempting to save herself from falling accidentally plunged her hand and arm into a large pan containing boiling water, which was being used by her.

Certificates of Fitness.—Notices had to be served on a few employers in respect to this section of the Act. As mentioned in a previous report, the inconvenience and expense incurred in some country places in having to journey long distances to a doctor at times causes non-observance of Section 45. The question of expense charged for medical examination is a vexed one in country centres.

Bakehouses.—In general I found conditions good, but in a few instances, as already mentioned under structural conditions, instructions had to be served on occupiers to repair flooring and provide ventilators; also limewashing of walls was ordered to be carried out by two or three occupiers.

Mr. Senior Inspector Burkitt (Tamworth) reports :—

This district embraces not only the whole of the north-western portions of the State, but also all the country accessible to the Northern line beyond Werris Creek. It contains some 475 factories, the greater part of which I have inspected at least once during the year; a few, however, were unavoidably omitted owing to difficulties of transport.

Registrations, &c.—Some 55 new factories have been registered during the year, in addition to a number of re-registrations on account of change of ownership or removal to fresh sites. A distinct forward movement has been made by the introduction of electric light and power in three large towns which were without it before. The municipal councils of Glen Innes and Narrabri, and a company at Armidale, have installed large and up-to-date plants, and the municipality of Tamworth has completely replaced its old one with a new power house containing much more powerful machinery, also of the latest description. These plants are all designed to transmit power over large areas of the surrounding country, and it is confidently anticipated that the result will be the establishment of many new factories. Companies are now being formed with the object of starting jam and bacon factories, and there is also talk of a woollen mill in the district. One new industry has commenced operations, viz., the manufacture of a poison for the destruction of the prickly pear, the factory being situated close to the Queensland border, and using large quantities of arsenic from the company's mines in that State.

Sanitation.—Unhappily, not one town in the district is sewered, though it is satisfactory to report that the controlling councils, municipal and shire, do the best that can be done with the pan system; but that is saying very little. In the circumstances it is just as well that there are no big factories to be considered. Some eight years ago the town of Tamworth contemplated the installation of a system, and great quantities of pipes for the purpose were made, which have ever since been standing, overgrown with weeds, waiting to be used. I have had but little fault to find with occupiers for the way in which sanitary matters have been attended to.

Guarding of Machinery and Accidents.—In a few cases I have found the fencing of shafting, pulleys, &c., to be constructed of light timber, and placed too close to danger points, being therefore practically worse than useless. These I promptly had replaced with substantial hardwood or iron piping, with strong wire-netting where necessary. In the great majority of places, however, the fencing and guarding was satisfactory. There are 72 saw-mills in the district, and in every case where an inspector had previously been the saws, &c., were provided with approved guards. Only two serious accidents were reported, viz: (1) While feeding a chaff-cutter the owner of the plant lost his arm below the elbow. The rollers were guarded by an iron plate projecting well to the front, but, probably on account of his attention being diverted, his hand was drawn in to the knives. (2) The foreman in charge of a saw-mill was engaged alone in dressing boards at a 4-sided planer, and, having fed a board in, was passing to the other end of the machine to tail it out, when he inadvertently placed his hand over the top of the semi-circular iron shield, which was intended to guard one of the side knives. He lost two fingers and a portion of a third. I consider it a fool-hardy proceeding to endeavour to manipulate a machine of this character without assistance.

Permits to work, Overtime, &c.—A few permits to work in factories, pending inquiry as to age, &c., have been issued to boys under 16, and none to children under 14 years of age.

The factories in this district are not of the character in which overtime is usually worked by females or boys under 16 years of age, and none have been reported during the year.

Mr. Inspector Waugh (South Coast) reports :—

This district includes all towns from Coalcliff to Eden on the South Coast.

Registrations.—No new factories were built during the year, and registrations were in connection with change of occupiers.

Sanitation.—On account of no sewerage system in the district, difficulty is experienced in getting some occupiers to keep their premises clean, but in the great majority of cases very little trouble is met with.

Fencing Machinery.—Occupiers of factories in which dangerous machinery is operated are generally ready to carry out any suggestion for the more efficient guarding and fencing of same, and at present there is little to complain of in this respect.

Accidents.—A fairly large number of slight accidents happened during the year, but the majority of these were not under section 38 of the Act. No fatal accident happened in the district during the year.

Bakehouses.—Bakehouses in the South Coast district are now in fairly good order; most of the old-time structures have been replaced by new buildings, which meet the requirements of the Factories and Shops Act.

Certificates of Fitness.—In factories where boys under 16 are employed, employers, as a rule, carry out the provisions of the Act.

Boiler Inspection.—I have paid particular attention to the exhibiting of certificates of inspection in accord with regulations.

General.—The only part of my district which shows signs of expansion is Port Kembla. Between 500 and 600 men are now employed at a large works there, a big increase on 1921. A new building is now being added for the manufacture of telephone cable, and this work will be in full swing at an early date.

Mr. Inspector Wallace (South-Western), Goulburn, reports :—

Registrations.—During the year I have attended to a large number of registrations and cancellations. A number of bakehouses changed hands. At Cooma and Pieton townships new electric light generating stations for the municipalities were registered.

Structural Conditions.—Structural alterations and improvements have been carried out in several factories, notably bakehouses and electric light generating stations. A cordial and aerated water factory, in connection with which the occupier had received a closing order, has now been replaced by a new brick building.

Sanitation.—

Sanitation.—The general sanitary conditions throughout the district show a marked improvement on the previous year. At Canowindra the sanitary pan system and closet accommodation has been considerably improved.

Persistent supervision is necessary to keep several of the occupiers up to their responsibilities with regard to general sanitary conditions.

At Goulburn, where the sewerage system is installed, a considerable improvement has been carried out in several of the factories, and, with the co-operation of the local health officer, whom I have to thank for his willing help, it has been possible to have important work carried out in connection with new sanitary premises and conveniences for employees in factories and shops.

Fencing.—The necessity for continual supervision of the fencing and guarding of machinery demands many visits to a large number of factories, the occupiers of which are inclined to be careless of their obligations. There has been a creditable improvement in the fencing and guarding in a number of large factories, notably flour-mills, sawmills, and electric power stations. It is notable that a number of new machines are purchased without being provided with guards. I have noticed several lathes, which have been manufactured in New South Wales, installed in the country without being fitted with the necessary guard over change wheels, whilst the American type of machine is fitted with a good design of guard.

Accidents.—There were no fatal accidents in the district during the year. Two accidents to two employees were caused through a steam boiler explosion which occurred at a chaff-cutting plant operating at Eurabba. Both employees were seriously injured through scalds and burns about the face, body, and limbs. Proceedings were instituted against the occupier and a substantial penalty inflicted.

In a cordial factory at Goulburn an employee had the top of a finger cut off in a crown sealing machine, caused through a bottle bursting and a portion of the glass remaining in the seal. The machine was well guarded.

In a sawmill at Robertson a youth met with an accident while endeavouring to put a belt on the end of driving shaft about 6 feet above the ground. His hand was caught, and the arm wound around the shaft with belt, causing the arm to be broken in three places.

At a sawmill at Bowral the sawyer met with an accident at a circular saw, losing the first joints of three fingers of the right hand, through slipping forward while running out a notched piece of timber. A guard was fitted on the saw.

Fire Escapes.—At Bombala, as a result of Departmental notice of requirements, a new fire escape has been provided at a flour mill.

Overtime.—During the year I have not received any notices of overtime having been worked. There appeared to be no need for overtime, although the bootmaking, dressmaking, and tailoring industries were busy towards the end of the year.

Certificates of Fitness.—In only a few instances was it necessary to enforce the requirements of this section of the Act.

Bakehouses.—There has been a steady improvement in the cleanliness of bakehouses. As a result of my interviews with the owners of two bakehouses at Bowral I was successful in having new ventilators fitted in the walls, and ventilating-pipes fitted with shutter and cowl from the ceiling through the roof to outer air. My suggestions *re* other bakehouses have resulted in improvement in the ventilation and sanitary conditions. Two new bakehouses are nearing completion at Goulburn and Grenfell, in connection with which I had an opportunity of suggesting the method of erection, and I feel sure from the progress made so far that they will be acquisitions to the country baking industry.

General.—I have had occasion to enforce the Boiler Inspection Regulations at various parts of the district. For the first time I visited the Stockingbingal to Caragabal line, and found a number of factories not registered.

Mr. Inspector Durack (Southern District) reports :—

Registrations.—During the year a large number of factories have been registered, the majority being of a substantial character, and a few of them of small dimensions. The former comprised several motor engineering works operating expensive machinery and capable of employing from twenty to thirty persons. Two bakehouses and a laundry are perhaps those which can be termed small buildings, yet in the case of the laundry it is fitted up with the latest types of machines, and modern dining-rooms and lavatory accommodation for both sexes are fitted up in accordance with the Act. This building will compare favourably with any of its class in the metropolitan area.

Fencing of Machinery.—This is perhaps the most important part of the inspector's work. The danger that arises from unfenced machinery is always before his eyes, yet looking on the district as a whole one can say that when directions were given they were, with few exceptions, fully obeyed. The exceptions mentioned were those of occupiers of sawmills. I have found this year, as well as in past years, the employers have shown a reluctance in providing fences and guards for machinery. This is especially shown in the case of circular saws. I have experienced much trouble in having guards provided for these machines in accordance with the Act. I have found that the employers are not alone blameable. Many employees often make the excuse that they cannot see their work when the regulation guards are placed on the saws.

Sanitation.—With the exception of a few large towns there is no sewerage system in the district. The removal service is provided by the municipal and shire councils. The health officers of these bodies pay a good deal of attention to this part of their duties, yet in a number of instances I have insisted upon more satisfactory methods.

Accidents.—There were three serious accidents during the year—an operative at a chaff-cutter losing his life through the explosion of a boiler. In the second case, an employee in a printing establishment attempted to repair a break in the paper, and in doing so had his hand caught between the cylinders, with the result that the fingers and thumb of his right hand were so mutilated that they had to be amputated.

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The third accident happened in a large wool-scouring plant. A drying-room attendant—a boy of 16½ years of age—left his place in the room, climbed on to the wool rollers and in taking a piece or broken wool away from them had his hand crushed to such an extent that it had to be amputated just below the elbow. These were the only accidents reported by the occupiers during the year.

Fire Escapes.—With the exception of a few flour mills there are no fire escapes in this district.

Bakehouses.—The general condition of bakehouses is very fair, but in outlying towns many out-of-date structures still remain. When, however, these premises are regularly limewashed and the sanitary conditions attended to, reasonable compliance with the Act is maintained.

Overtime.—There has been little or no overtime worked in the district during the year.

General.—This very large district includes all towns on the main Southern line, as well as branch towns south of Murrumburrah, all of which require regular inspection. Thus it will be seen that it is difficult for an officer to pay as many visits as he wishes to these districts. I have visited every town twice, and many of the towns and districts three and four times during the past year.

Mr. Inspector Baker (Western), Orange, reports:—

The district includes all towns on the main Western line and branches west of Bathurst, with the exception of the line Blayney to Cowra.

During the year I carried out general inspections over the whole district, and with few exceptions visited the principal towns twice. Adverse weather conditions, however, prevented some of the outlying factories being visited during the second periodical round of inspection. Full use was again made of the departmental motor-car.

Registrations.—In addition to the registrations brought about by changes in occupancy, there was an increase of factory registrations during the year. A number of these were in respect of timber mills. Several of these were most difficult to find, being from 10 to 15 miles off the main roads, and in several instances it was only by following the timber-waggon tracks through the scrub that they were eventually found.

The registrations in the district are gradually increasing, and in several of the larger towns a better class of building is now being used for factory purposes.

Sanitation.—I found that several of the printing offices in the district required a thorough cleaning, and I instructed the occupiers accordingly.

Orange is still the only sewered town in this district, the others employ either the pan system, or cess-pit, as the means for the disposal of night-soil, and in many towns soiled water is allowed to run into the street gutters.

Unfortunately there appears to be no possibility of any early improvement in the sanitary systems at present in use in most of the western district towns. The cost of sewerage works and reticulation might be met in many of the larger towns, but the chief, and what at present appears to be the insurmountable obstacle, is the very limited water supply. As a matter of fact, some towns have none.

In last year's report I drew attention to the insanitary condition of a large block of buildings at Dubbo. The defect was caused by pan closets being within portion of the main building. There was a factory in portion of the block. I brought the condition of this building under the notice of the Health Officer, and am pleased to report that the whole of the W.C.'s have been removed to a satisfactory position.

Notices were served on a number of occupiers to limewash, paint, or varnish the walls and ceilings of their workrooms, to provide hoods and flues for the purpose of carrying off from metal melting-pots or heating apparatus exhaust gases or fumes to the outer air. Similar instructions were given in respect of the exhaust gases of internal-combustion engines. Attention was also given to the ventilation of workrooms, and in several instances additional ventilation was ordered to be provided in the ceilings of bakehouses.

No case of overcrowding of workrooms came under my notice.

Fencing of Machinery.—Steady improvement was maintained in this important work during the year. It is difficult, however, to get this work carried out in a satisfactory manner, unless the occupier is supplied with exact details of the class of fence or guard required. I found the photo. prints of guards a great help.

In all cases where internal-combustion engines were employed in factories, and were not connected to the machine or shafting in a manner that provided proper mechanical means of control of the machinery, I have instructed occupiers to provide such means of control.

Boiler Inspection.—All occupiers of factories using uncertificated steam boilers or other pressure vessels were instructed to have such apparatus inspected, and to exhibit the certificates.

Accidents.—The number of accidents inquired into during the year was not many. One, however, terminated fatally. This accident occurred at a circular saw in a timber mill. The benchman and his mate were engaged ripping 12-feet planks, 7 in. x 1 in., from pine pieces about 7 in. x 7 in. x 12 feet long. The last cut was being made off one of these pieces, and the saw-blade was within a few inches of the end (on the point of breaking through) when the sawyer removed his hand from it. The timber jumped on the bench, and was dragged from the tailer-out's hands. The board got on top of the saw, and was thrown with great velocity in the direction of the sawyer. It struck him in the temple, and drove a splinter into his brain, death resulting the following day. Although the occupier of this factory had been given written instructions to affix an approved guard at this saw he had failed to do so.

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An employee at a flour-mill had his arm broken whilst attempting to put a belt on a pulley on the engine shaft, which projected some distance beyond the pulley. The employee's hand was carried round the pulley with the belt, and the arm was broken by the projecting spindle.

A man employed cutting sausages at an "Enterprise mincer," slipped on the floor, and his index finger lost a joint by coming in contact with the worm gear of the machine.

Prosecutions.—The occupier of the timber mill at which the fatal accident occurred at a circular saw, was proceeded against for a breach of section 33 for failing to securely fence a circular saw.

The defendant was found guilty, and the maximum fine was imposed.

Fire Escapes.—With the exception of the flour-mills and a brewery, there are no other factories in the district where operations are carried on above the first floor. The mills have alternative means of escape.

Certificates of Fitness.—Several employers were warned for employing employees under the age of 16 years without certificates of fitness.

Overtime Restrictions.—Practically no overtime was worked during the year.

Mr. Inspector Nolan (Western) reports :—

Registrations.—There was little expansion in my district under this heading during the period under review. The chief matters of interest concerned the registrations of two slate-cutting factories in the Mudgee district, where there are large slate deposits. It is anticipated that the industry will speedily develop in the district mentioned.

Structural Alterations.—I did not find it necessary to recommend the issue of a Minister's order under this heading, as where it was necessary to effect structural alterations, general directions were sufficient.

Sanitation.—Only a small portion of my district is sewered, and the provisions of the Local Government Acts ensure good service where the pan system is used. I found it necessary to issue directions to a number of occupiers of small factories with regard to the cleanliness of closet accommodation, and the cause appeared to be due to the occupiers leaving the matter of proper attention to all and sundry, instead of making it some particular person's responsibility.

Fencing and Guarding Machinery.—Close attention has been paid to matters coming within the scope of this section, and it is gratifying to note that the number of accidents, compared with previous years, has greatly diminished. Investigations have proved that a number of accidents happened through employees taking unnecessary risks, and not exercising sufficient care when necessity compels them to be near danger-points. A case in point occurred at a cement-making factory, where an employee had occasion to apply dressing to a belt to prevent it slipping. He was in the act of applying the dressing with a short stick, at the intake point, and quite close to the pulley, when the stick jambed between the belt and pulley and resulted in a broken right arm and lacerated forehead. The dressing could have been effectively applied at a safe distance from the danger-point. Another matter that is frequently overlooked is the possibility of accidents occurring when machines—circular saws, &c.—are not in actual use. Experience has proved that such machines should be put out of action when not required for ordinary purposes. An employee at a sawmill had occasion to leave a circular saw to visit another part of the factory. He was returning to the saw, and was about 9 feet from the end of the bench when he tripped over some scrap timber; fearing that his head would strike the saw, he reached out to avoid that possibility, with the result that his hand struck the front or unguarded portion of the saw and was severely lacerated. This accident, like others of the same character that have come under my notice, seems to indicate that when any unforeseen event occurs, such as above described, the persons concerned become seized with an irresistible impulse to reach out to the very point they should and could under normal circumstances avoid.

Fire Escapes.—There are very few factories in my district affected by this section. A fire escape recommended by the Chief Officer of Fire Brigades was erected at a flour-mill in the Coonabarabran district.

Overtime.—Very little overtime was worked by juveniles in my district during the period under review, and the necessary notification, keeping of records, and the payment of overtime, were apparently well observed.

Bakehouses.—The condition of bakehouses visited can be classed as satisfactory. One exception concerned a bakehouse in a once-prosperous mining centre. Owing to the closing down of the mines the population greatly diminished, and the bakehouse, like other buildings in the district, was allowed to get into a state of disrepair. Instructions were given to effect certain repairs pending the closing up of the bakehouse altogether, and an intimation from the occupier stated that the place has been demolished.

Certificates of Fitness.—The section of the Act dealing with certificates of fitness has been reasonably well observed.

General.—Several instances have come under my notice which clearly indicate that occupiers and persons in charge of factories are now giving better attention to matters involving the safety and well-being of employees. The superintendent of one large factory informed me that his ideas have recently changed, and he intimated that he will not now permit any worker to take an unnecessary risk, and he quoted several cases where he insisted upon proper precautions being taken to avoid accidents. The manager of another factory stated that he invited the employees to report immediately upon any matter requiring attention, which would have the effect of minimising the risk of accident.

Mr.

Mr. Inspector Aldington (Broken Hill) reports :—

General.—For the period 1st January to 7th June I was in charge of No. 4 District, Metropolitan area, and was able to inspect the whole of the factories in this district. On the 12th June, I took charge of the Broken Hill District, where my duties have been chiefly of an industrial nature, which has prevented me from paying as much attention to factory inspection as I would have wished.

Registrations.—The majority of registrations attended to were due to the change of occupier. A few new buildings were erected for factory purposes, in which marked improvement in the general working conditions of factory employees was evidenced.

Structural Conditions.—There were a number of alterations to factories carried out, resulting in a general improvement of conditions; in no case was it deemed necessary to serve a special order of the Minister.

Sanitation.—The general sanitary conditions of factories in the Metropolitan district were found to be fairly good, but in the Broken Hill district occupiers are considerably hampered owing to the lack of an efficient sanitary system, and adverse weather conditions.

Fencing of Machinery.—One of the most dangerous machines used in a factory is a hydro-extractor. A portion of my time whilst in the Metropolitan district was taken up in assisting to obtain an efficient guard for this machine. The greatest difficulty is experienced in getting the majority of machine operators to maintain the guards supplied in position. A number of occupiers are of the opinion that once they supply the required guards their responsibility ends. It was deemed necessary in one case to prosecute the occupier for failing to maintain a guard on a dangerous machine; he had previously been warned of this necessity.

Fire Escapes.—Special attention was paid to the means of escape in case of fire. In one case, whilst testing an escape four " treads " moved whilst under-foot. On investigation it was found that the rivets used in fastening the treads to the supports had rusted through and fallen out. The required repairs were quickly carried out by the owner of the building.

Bakehouses.—Generally speaking, bakehouses in both districts are in a satisfactory condition, there being few cases where it was found necessary to issue instructions.

Appendix I.

Persons employed, by Class of Factory, Classified by Industry—1922.

THE STATE.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 1.—TREATING RAW MATERIAL, THE PRODUCT OF PASTORAL PURSUITS.												
(a) Animal Products.												
Boiling-down and tallow-refining	11	.....	.....	.....	.....	5	.....	109	.....	114	.....	114
Glue	2	.....	5	5	10	2	23	105	10	112	48	160
Tanning	75	20	.....	34	.....	51	.....	844	.....	949	.....	949
Wool-scouring and fellmongering ...	36	7	.....	35	3	72	7	952	9	1,066	19	1,085
Other animal products...	11	52	.....	49	.....	23	.....	186	1	310	1	311
Total	135	79	5	123	13	153	30	2,196	20	2,551	68	2,619
(b) Vegetable Products.												
Chaff-cutting	169	2	.....	14	.....	8	.....	259	.....	283	.....	283
Total, Class 1...	244	81	5	137	13	161	30	2,455	20	2,834	68	2,902
CLASS 2.—OILS AND FATS—ANIMAL AND VEGETABLE.												
Oil and grease	12	5	.....	11	.....	29	.....	180	.....	225	.....	225
Soap, candles, &c.	24	22	31	38	59	88	90	421	105	569	285	854
Total, Class 2...	36	27	31	49	59	117	90	601	105	794	285	1,079
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &C.												
Asphalt	8	.....	.....	1	.....	6	.....	30	.....	37	.....	37
Bricks and tiles...	145	106	.....	167	.....	213	6	2,264	14	2,750	20	2,770
Glass and glass bottles	9	6	.....	34	.....	140	.....	703	.....	883	.....	883
Glass (ornamental)	28	15	.....	67	1	58	.....	273	.....	413	1	414
Lime, plaster, and cement	16	.....	.....	8	.....	10	.....	369	.....	387	.....	387
Marble and slate	12	.....	.....	8	.....	8	.....	192	.....	208	.....	208
Modelling and fibrous plaster... ...	24	6	.....	23	.....	39	.....	172	.....	240	.....	240
Monumental masonry	33	.....	.....	12	.....	11	.....	205	.....	228	.....	228
Pottery and earthenware	22	60	.....	45	2	58	.....	524	22	687	24	711
Stone-dressing	47	3	.....	10	.....	10	.....	898	.....	921	.....	921
Other works	25	2	.....	7	1	34	.....	368	.....	411	1	412
Total, Class 3	369	198	.....	382	4	587	6	5,998	36	7,165	46	7,211
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	1	.....	.....	.....	.....	.....	.....	4	.....	4	.....	4
Boxes and packing-cases	71	27	.....	80	.....	77	.....	572	.....	756	.....	756
Cooperage	14	8	.....	30	.....	27	.....	270	.....	335	.....	335
Joinery	303	73	.....	240	.....	290	.....	2,284	2	2,887	2	2,889
Saw-milling—Timber	524	38	.....	202	.....	300	3	3,205	1	3,745	4	3,749
Firewood	207	.....	.....	10	.....	10	.....	315	.....	335	.....	335
Wood-turning	23	10	.....	8	.....	12	.....	60	.. ...	90	.....	90
Other works	42	4	1	19	.....	33	.....	211	1	267	2	269
Total, Class 4	1,184	160	1	589	.....	749	3	6,921	4	8,419	8	8,427
CLASS 5.—METAL WORKS, MACHINERY, &C.												
Agricultural implements	19	6	.....	28	.....	34	.....	223	.....	291	.....	291
Brass and copper	64	32	3	142	8	133	6	802	4	1,109	21	1,130
Cutlery	30	5	.....	20	.....	22	.....	83	.....	130	.....	130
Engineering	358	115	1	519	10	1,024	28	5,147	16	6,805	55	6,860
Galvanised iron	47	32	.....	79	.....	73	.....	531	1	715	1	716
Iron works, foundries, & boilermaking	159	65	.....	259	1	364	5	3,728	17	4,416	23	4,439
Iron safes and doors	3	.....	.....	8	.. ...	6	.....	62	.....	76	.....	76
Lead-mills	2	.....	.....	.....	.....	3	.....	22	.....	25	.....	25
Railway carriage works	5	7	... ..	25	.....	50	.....	268	.....	350	.....	350
Smelting and ore dressing	11	2	.....	3	.....	17	.....	440	.....	462	.....	462
Stoves and ovens	20	12	.....	54	1	72	6	471	3	609	10	619
Tinsmithing	31	100	6	157	33	167	54	653	82	1,077	175	1,252
Wire-working	18	24	.....	124	.....	144	.....	535	.....	827	.....	827
Other metal works	96	69	5	191	35	193	25	1,138	20	1,591	85	1,676
Plumbing	32	7	.....	28	.....	32	.....	287	.....	354	.....	354
Farriery	34	2	.....	6	.....	10	.....	99	.....	117	.....	117
Total, Class 5...	929	478	15	1,643	88	2,344	124	14,489	143	18,954	370	19,324
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(a) Animal Food.												
Bacon	18	2	.....	3	.....	8	.....	174	.....	187	.....	187
Butchers' smallgoods	738	5	.....	21	.....	51	.....	996	.....	1,073	.....	1,073
Margarine	4	3	.....	3	.....	22	.....	104	.....	132	.....	132
Meat-preserving	14	11	1	22	4	39	5	828	29	900	39	939
Total	774	21	1	49	4	120	5	2,102	29	2,292	39	2,331

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 6.—CONNECTED WITH FOOD AND DRINK AND THE PREPARATION THEREOF—*continued.*												
(*b*) *Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.*												
Biscuits	9	205	134	115	186	81	218	259	270	660	808	1,468
Bread and pastry	1,282	66	4	256	8	280	19	2,624	98	3,226	129	3,355
Confectionery	191	48	139	106	242	98	370	535	284	787	1,035	1,822
Corn-flour and oatmeal	13	5	9	9	28	14	44	146	72	174	153	327
Flour-milling	62	2	... ..	23	.....	44	.....	603	.....	672	... ..	672
Jam and fruit preserving	27	6	6	16	16	51	33	310	224	383	279	662
Pickles, sauces, and vinegar	13	6	1	4	13	15	17	57	99	82	130	212
Poultry foods and dog biscuits	8	3	.....	10	.....	5	.....	142	1	160	1	161
Self-raising flour	4	.....	7	5	6	6	21	9	13	20	47	67
Sugar-refining	5	5	2	10	.....	22	7	489	9	526	18	544
Total	1,614	346	302	554	499	616	729	5,174	1,070	6,690	2,600	9,290
(*c*) *Drinks and Stimulants.*												
Aerated waters and cordials	181	16	5	100	20	125	33	616	30	857	88	945
Brewing	17	.....	.....	9	.....	38	.....	925	.....	972	.....	972
Condiments, coffee, spices, &c.	38	63	124	60	192	63	247	360	243	546	806	1,352
Distillery	2	...	.....	...	.....	...	.....	47	.....	47	.....	47
Ice and refrigerating	203	17	.....	41	.....	33	.....	893	.....	984	.....	984
Tea blending and packing	17	42	23	22	31	21	54	87	48	172	156	328
Wine, spirits, and beer bottling	59	1	.....	31	2	35	10	332	56	399	68	467
Total	517	139	152	263	245	315	344	3,260	377	3,977	1,118	5,095
(*d*) *Narcotics.*												
Tobacco, cigars, and cigarettes	17	44	116	110	150	126	330	488	654	768	1,250	2,018
Total, Class 6	2,922	550	571	976	893	1,177	1,408	11,024	2,130	13,727	5,007	18,734
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(*a*) *Textile.*												
Woollen mills	11	51	95	62	116	70	224	689	490	872	925	1,797
(*b*) *Dress.*												
Boots and shoes:—Order made	401	30	1	54	3	65	2	747	11	896	17	913
Factory made	101	188	351	185	329	209	363	2,311	1,066	2,893	2,100	4,993
Clothing:—Men's slops	83	29	355	41	500	55	487	504	1,340	629	2,682	3,311
Women's slops	165	6	297	7	496	17	475	94	1,558	124	2,826	2,950
Tailoring	435	22	248	52	536	77	547	1,389	2,116	1,540	3,447	4,987
Corsets	11	4	109	3	115	6	171	16	230	29	625	654
Dressmaking and millinery:—												
Makers' material	157	5	292	5	555	4	617	29	1,257	43	2,721	2,764
Customers' material	195	...	98	...	185	...	171	4	461	4	915	919
Dye works	29	1	4	12	6	20	16	99	92	132	118	250
Furriery	15	3	4	9	16	9	26	29	54	50	100	150
Hats and caps	30	43	73	48	129	52	173	248	282	391	657	1,048
Hosiery and knitting	69	47	327	87	491	105	612	231	707	470	2,137	2,607
Oilskin and waterproof clothing	12	1	5	1	7	2	15	30	49	34	76	110
Shirts, ties, and scarves	38	10	276	23	296	15	344	66	673	114	1,589	1,703
Umbrellas	8	10	12	4	26	6	23	24	45	44	106	150
Underclothing	89	2	128	8	234	7	269	23	600	40	1,231	1,271
Wigs and hair work	11	...	3	...	6	..	13	2	26	2	48	50
Total	1,849	401	2,583	539	3,921	649	4,324	5,846	10,567	7,435	21,395	28,830
(*c*) *Fibrous Materials and Textiles not elsewhere included.*												
Bags and sacks	10	7	40	14	31	14	79	93	97	128	247	375
Rope and twine	10	11	6	105	18	29	15	97	9	242	48	290
Tents and tarpaulins	9	10	4	9	5	6	12	48	60	73	81	154
Total	29	28	50	128	54	49	106	238	166	443	376	819
Total, Class 7	1,889	480	2,728	729	4,091	768	4,654	6,773	11,223	8,750	22,696	31,446
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	20	3	2	10	5	15	4	73	12	101	23	124
Electrotyping and stereotyping, type founding, and printers' materials.	21	5	5	16	13	13	8	88	5	122	31	153
Paper bags and boxes	11	34	124	37	178	35	185	137	239	243	726	969
Paper mills, cardboard, and straw-board	6	17	21	20	30	15	33	251	45	303	129	432
Photo.-engraving, photo.-lithography, and photo. materials	59	7	27	30	52	24	81	160	178	221	338	559
Printing, bookbinding, and manufacturing stationery	489	227	208	512	350	467	378	3,848	715	5,054	1,651	6,705
Total, Class 8	606	293	387	625	628	569	689	4,557	1,194	6,044	2,898	8,942
CLASS 9.—MUSICAL INSTRUMENTS, &C.												
Pianos, organs, and sewing-machines	27	21	2	58	7	75	14	454	15	608	38	646
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	5	2	.....	2	2	3	.....	12	1	19	3	22

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY, HARNESS, &c.												
Coaches and waggons	252	43	.....	146	.....	180	.....	1,061	.....	1,430	.....	1,430
Cycles and motor cars	587	87	.....	338	8	508	8	2,662	30	3,595	46	3,641
Perambulators, &c.	8	13	.....	11	1	18	1	94	4	136	6	142
Saddlery, harness, &c....	59	23	3	29	6	27	9	387	34	466	52	518
Naves, spokes, &c.	13	2	.....	6	.....	30	.....	95	.....	133	.....	133
Whips	3	...	.....	3	.....	2	.....	13	.....	18	.....	18
Total, Class 11	922	168	3	533	15	765	18	4,312	68	5,778	104	5,882
CLASS 12.-SHIPBUILDING, FITTINGS, &c.												
Docks and slips...	5	1	.....	42	.....	90	.....	380	.....	513	.....	513
Sailmaking	6	1	.....	1	1	1	.....	25	16	28	17	45
Ship and boat building...	33	5	.....	31	.....	70	.....	541	.....	647	.....	647
Total, Class 12	44	7	.. ...	74	1	161	. ...	946	16	1,188	17	1,205
CLASS 13.—FURNITURE, BEDDING, &c.												
Bedding, flock, and upholstery ...	50	21	21	62	35	65	50	369	231	517	337	854
Carpet-sewing	5	...	2	...	2	1	11	16	37	17	52	69
Iron Bedsteads	5	20	.....	27	.....	30	.....	223	.....	300	.....	300
Billiard tables	2	11	.....	10	... ..	5	.....	81	.....	107	.....	107
Chair-making	16	11	.....	39	.....	46	.....	158	.....	254	.....	254
Furniture and cabinet making—												
European	225	100	1	321	1	346	4	1,741	12	2,508	18	2,526
Chinese	39	...	.....	...	.....	3	.....	295	.....	298	... .	298
Bamboo and wicker	17	6	... ..	6	.....	10	.. ...	144	.....	166	.....	166
Picture frames	29	7	4	9	4	10	3	78	21	104	32	136
Window blinds	8	9	6	7	6	10	1	60	22	86	35	121
Total, Class 13	396	185	34	481	48	526	69	3,165	323	4,357	474	4,831
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c. ...	16	11	54	11	59	8	80	68	49	98	242	340
Chemical works and drugs	65	37	56	55	111	42	144	347	221	481	532	1,013
Fertilisers	10	1	.....	2	.....	4	.....	120	.. ...	127	.....	127
Perfumes and essences...	20	8	28	16	49	13	57	39	31	76	165	241
Paints and varnishes	22	53	6	35	9	38	19	400	18	526	52	578
Other Minor Works	5	1	3	1	2	5	3	18	1	25	9	34
Total, Class 14	138	111	147	120	230	110	303	992	320	1,333	1,000	2,333
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	30	3	13	11	11	13	10	71	13	98	47	145
Surgical instruments	5	...	.....	4	.....	2	3	25	6	31	9	40
Other Minor Works	4	...	.....	1	.....	1	.....	4	.....	6	.....	6
Total, Class 15	39	3	13	16	11	16	13	100	19	135	56	191
CLASS 16.—TIMEPIECES, JEWELLERY, AND PLATEDWARE.												
Electroplating	30	8	.....	34	1	27	1	211	1	280	3	283
Jewellery	78	8	7	35	9	85	18	428	46	556	80	636
Total, Class 16	108	16	7	69	10	112	19	639	47	836	83	919
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	87	29	1	137	3	245	5	590	3	1,001	12	1,013
Electric light and power works* ...	302	4	.....	25	.....	37	.....	793	.....	859	.....	859
Gas works	42	5	.....	17	.....	23	.....	1,128	.....	1,173	.....	1,173
Lamps and gas mantles	8	2	4	5	31	7	45	50	49	64	129	193
Hydraulic power	4	...	.. ...	1	.....	1	.....	30	.....	32	... ..	32
Coke works	13	...	.....	7	... ..	12	.....	249	.....	268	.....	268
Total, Class 17	456	40	5	192	34	325	50	2,840	52	3,397	141	3,538
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy leather	24	28	22	30	46	29	56	223	64	310	188	498
Leather belting	7	6	.....	8	.....	11	.....	45	.....	70	.....	70
Portmanteaux	15	38	9	48	25	55	29	222	41	363	104	467
Other Minor Works	22	29	23	9	24	13	35	56	25	107	107	214
Total, Class 18	68	101	54	95	95	108	120	546	130	850	399	1,249
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting...	8	1	3	6	3	8	.....	127	14	142	20	162
Brooms, brushes	29	13	15	27	19	43	10	177	29	260	73	333
Florists and seedsmen	10	5	10	...	7	4	13	24	9	33	39	72
Laundries—European†	147	2	51	3	157	9	332	186	1,018	200	1,558	1,758
Chinese	26	...	.....	...	4	...	.....	33	10	33	14	47
Rubber goods	10	28	40	34	58	37	140	483	376	582	614	1,196
Toys	27	11	6	12	12	14	6	68	10	105	34	139
Painting and sign-writing	13	2	.....	9	2	14	.....	147	.....	172	2	174
Other Minor Works	22	9	7	30	29	51	22	130	37	220	95	315
Total, Class 19	292	71	132	121	291	180	523	1,375	1,503	1,747	2,449	4,196
Total, All Industries ...	10,674	2,992	4,135	6,891	6,525	8,853	8,133	68,199	17,349	86,935	36,142	123,07

* Including 232 electric lighting plants for picture shows, employing 232 persons.

† Charitable institutions doing outside laundry work are included in the number of factories registered.

Appendix II.

Factories, by Number of Persons employed—1918-1922

Year.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																	
1918	2,044	1,349	688	304	146	130	92	40	70	33	20	9	4	7	4	2	4,942
1919	2,247	1,398	744	319	161	175	76	43	72	45	23	9	4	7	5	2	5,330
1920	2,640	1,452	752	335	169	178	99	54	70	33	27	10	4	7	8	4	5,842
1921	2,603	1,604	751	340	187	152	96	44	78	22	26	10	6	8	3	4	5,934
1922	2,912	1,648	776	342	206	161	103	49	73	34	32	8	7	10	3	3	6,367
Newcastle District.																	
1918	480	181	87	27	12	11	4	...	1	4	1	...	...	1	...	1	810.
1919	492	202	103	26	13	10	3	3	6	2	4	...	1	...	...	1	866
1920	528	238	94	29	11	14	3	3	9	...	5	...	1	...	...	1	936
1921	598	258	89	29	11	12	7	...	3	3	2	3	1	...	...	1	1,017
1922	676	269	86	28	15	9	5	..	5	2	4	...	...	...	1	...	1,100
Rest of State.																	
1918	1,701	635	181	39	15	12	3	1	1	3	1	...	1	1	...	...	2,594
1919	1,909	638	175	48	17	8	1	3	1	3	1	2	..	1	...	...	2,807
1920	2,127	600	177	37	9	7	4	1	...	...	3	1	...	...	1	..	2,967
1921	2,195	707	170	25	18	7	3	1	4	2	..	2	1	1	...	...	3,136
1922	2,294	680	176	26	12	7	4	1	3	3	...	...	1	...	...	...	3,207
State.																	
1918	4,225	2,165	956	370	173	153	99	41	72	40	22	9	5	9	4	3	8,346
1919	4,648	2,238	1,022	393	191	193	80	49	79	50	28	11	5	8	5	3	9,003
1920	5,295	2,290	1,023	401	189	199	103	58	79	33	35	11	5	7	9	5	9,745
1921	5,396	2,569	1,010	394	216	171	106	45	85	27	28	15	8	9	3	5	10,087
1922	5,882	2,597	1,038	396	233	177	112	50	81	39	36	8	8	10	4	3	10,674

Appendix III.

Factories, by Class and Number of Persons employed, 1922.

Class of Factory.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																	
I. Treating raw material, product of pastoral pursuits...	59	30	16	10	5	4	4	2	3	2	...	...	1	...	...	...	136
II. Oils and fats—animal, vegetable, &c ...	5	8	3	2	2	...	2	...	1	...	...	...	...	1	...	...	24
III. Processes relating to stone, clay, glass, &c.	54	52	50	25	19	15	5	3	3	2	2	...	...	2	...	...	232
IV. Working in wood	217	137	40	18	10	4	5	1	4	1	1	...	...	...	...	...	438
V. Metal works, machinery, &c.	299	203	97	30	23	19	22	7	11	4	2	2	...	2	1	...	722
VI. Connected with food and drink, &c. ..	879	204	91	24	22	10	11	9	10	3	2	3	2	4	1	1	1,276
VII. Clothing and textile fabrics, &c.... ...	593	434	205	95	64	56	34	14	21	13	13	3	2	1	1	...	1,549
VIII. Books, paper, printing, engraving, &c. ...	147	117	55	35	17	15	7	1	6	4	6	...	1	...	...	...	411
IX. Musical instruments, &c.	9	6	6	2	1	1	...	...	...	...	1	...	...	...	...	...	26
X. Arms and explosives	1	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XI. Vehicles and fittings, saddlery, harness, &c.	189	148	35	18	6	7	4	2	3	1	1	...	...	...	...	...	414
XII. Ship and boat building, &c.	10	10	3	4	3	1	1	1	1	...	...	...	1	..	...	...	35
XIII. Furniture, bedding, &c.	124	96	55	29	12	4	3	3	7	2	...	...	..	...	...	...	335
XIV. Drugs, chemicals, and by-products ..	41	40	18	10	5	5	1	2	2	...	2	...	...	...	...	...	126
XV. Surgical and other scientific instruments	23	5	6	...	...	1	...	...	...	...	...	...	..	...	...	...	35
XVI. Jewellery and plated-ware, &c.	52	21	18	2	6	2	...	...	...	...	...	...	...	...	...	...	101
XVII. Heat, light, and power	104	35	16	11	3	6	2	1	...	1	1	..	...	...	...	1	181
XVIII. Leatherware (excepting saddlery and harness)	17	23	15	4	4	2	...	1	...	1	1	...	...	...	...	...	68
XIX. Minor wares not elsewhere included ...	89	75	47	23	4	9	2	2	1	...	...	...	...	...	...	1	253
Total	2,912	1,648	776	342	206	161	103	49	73	34	32	8	7	10	3	3	6,367
Newcastle District.																	
I. Treating raw material, product of pastoral pursuits...	11	1	...	...	...	...	...	..	1	...	...	...	..	...	...	...	13
II. Oils and fats—animal, vegetable, &c. ...	1	2	1	...	...	...	...	...	...	...	1	...	...	...	...	...	5
III. Processes relating to stone, clay, glass, &c.	21	13	4	6	2	...	...	...	...	...	...	...	...	...	...	...	46
IV. Working in wood	113	58	27	6	4	2	1	...	...	...	..	...	...	...	...	...	211
V. Metal work, machinery, &c.	36	20	9	3	1	1	1	...	3	1	2	...	...	...	1	...	78
VI. Connected with food and drink, &c. ..	313	53	11	2	2	2	1	...	1	...	...	...	...	...	...	...	385
VII. Clothing and textile fabrics, &c.	38	51	13	3	3	2	2	..	...	1	1	...	...	...	...	...	114
VIII. Books, paper, printing, engraving, &c. ..	15	16	3	1	2	...	...	...	...	...	..	...	..	...	...	...	37
IX. Musical instruments, &c.	...	1	...	...	...	...	...	...	..	...	...	...	...	...	...	...	1
XI. Vehicles and fittings, saddlery, harness, &c.	53	23	8	2	...	...	...	...	...	...	...	...	...	...	...	..	86
XII. Ship and boat building, &c.	3	4	2	...	...	...	...	..	...	...	...	...	...	...	...	...	9
XIII. Furniture, bedding, &c.	10	11	4	2	1	...	...	...	...	...	...	...	...	...	...	...	28
XIV. Drugs, chemicals, and by-products ..	1	4	1	...	...	1	...	...	...	...	...	...	...	..	...	...	7
XV. Surgical and other scientific instruments	3	...	...	...	...	...	..	..	...	...	...	...	...	...	...	...	3
XVI. Jewellery and plated-ware, &c.	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
XVII. Heat, light and power	48	8	1	1	...	1	...	...	...	...	...	...	...	...	...	...	59
XIX. Minor wares, n.e.i	7	3	2	2	...	...	...	...	...	...	...	...	...	...	...	...	14
Total	676	269	86	28	15	9	5	...	5	2	4	...	...	...	1	...	1,100

Appendix III—*continued.*

Class of Factory.	Number of Factories in which the number of persons employed is -																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Rest of State.																	
I. Treating raw material, product of pastoral pursuits	62	21	11	...	1	...	...	..	...	...	...	...	...	...	...	...	95
II. Oils and fats—animal, vegetable, &c.	5	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7
III. Processes relating to stone, clay, glass, &c.	36	36	8	3	1	3	2	1	...	1	...	...	...	...	...	...	91
IV. Working in wood	344	124	57	6	3	1	...	...	...	...	..	...	...	...	...	...	535
V. Metal work, machinery, &c.	79	38	7	2	...	...	1	...	...	1	...	...	1	...	...	...	129
VI. Connected with food and drink, &c.	1,113	108	30	3	4	1	...	...	2	...	...	...	...	...	...	...	1,261
VII. Clothing and textile fabrics, &c	86	116	16	3	1	2	...	...	1	1	...	...	...	...	...	...	226
VIII. Books, paper, printing, engraving, &c.	90	53	14	1	...	...	...	...	...	...	...	...	...	...	...	...	158
XI. Vehicles and fittings, saddlery, harness, &c.	270	133	19	...	...	...	...	...	...	...	...	...	...	...	...	...	422
XIII. Furniture, bedding, &c.	19	13	1	...	...	...	...	...	...	...	...	...	...	...	...	...	33
XIV. Drugs, chemicals, and by-products	5	...	...	...	...	...	1	...	...	...	...	...	..	...	...	...	6
XV. Surgical and other scientific instruments	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XVI. Jewellery and plated-ware, &c.	2	1	...	...	...	...	...	...	...	...	..	...	...	...	...	...	3
XVII. Heat, light and power	169	29	10	6	2	...	...	...	...	...	...	...	...	...	...	...	216
XIX. Minor wares, n.e.i.	13	6	3	2	...	...	...	...	...	...	..	...	..	...	...	...	24
Total	2,294	680	176	26	12	7	4	1	3	3	...	...	1	...	...	...	3,207
State.																	
I. Treating raw materials, product of pastoral pursuits	132	52	27	10	6	4	4	2	4	2	..	...	1	...	...	...	244
II. Oils and fats—animal, vegetable, &c.	11	12	4	2	2	...	2	...	1	1	1	...	...	1	...	...	37
III. Processes in stone, clay, glass, &c.	111	101	62	34	22	18	7	4	3	3	2	...	...	2	...	...	369
IV. Working in wood	674	319	124	30	17	7	6	1	4	1	1	...	...	...	...	...	1,184
V. Metal works, machinery, &c.	414	261	113	35	24	20	24	7	14	6	4	2	1	2	1	...	928
VI. Connected with food and drink, &c.	2,305	365	132	29	28	13	12	9	13	3	2	3	2	4	2	1	2,923
VII. Clothing and textile fabrics, &c.	717	601	234	101	68	60	36	14	22	14	14	3	2	1	1	...	1,888
VIII. Books, paper, printing, and engraving, &c.	252	186	72	37	19	15	7	1	6	4	6	...	1	...	...	...	606
IX. Musical instruments, &c.	9	7	6	2	1	1	...	...	...	...	1	...	...	...	..	...	27
X. Arms and explosives	1	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XI. Vehicles and fittings, saddlery and harness, &c.	512	304	62	20	6	7	4	2	3	1	1	...	...	...	...	...	922
XII. Ship and boat building, &c.	13	14	5	4	3	1	1	1	1	...	...	...	1	...	...	...	44
XIII. Furniture, bedding, &c.	153	120	60	31	13	4	3	3	7	2	...	...	...	..	...	...	395
XIV. Drugs, chemicals, and by-products	47	41	19	10	5	6	2	2	2	...	2	...	...	...	...	...	139
XV. Surgical and other scientific instruments	27	5	6	...	...	1	...	...	...	...	...	...	...	...	...	...	39
XVI. Jewellery and plated-ware, &c.	57	23	18	2	6	2	...	...	...	...	...	...	...	...	...	...	108
XVII. Heat, light, and power	321	72	27	18	5	7	2	1	...	1	1	...	...	...	..	1	456
XVIII. Leatherware, n.e.i.	17	23	15	4	4	2	...	1	...	1	1	...	...	...	...	...	69
XIX. Minor wares, n.e.i.	109	84	52	27	4	9	2	2	1	..	...	...	...	...	...	1	291
Total	5,882	2,597	1,038	396	233	177	112	50	81	39	36	8	8	10	4	3	10,674

Appendix IV.

Persons employed, by Class of Factory, Classified by Industry—1922.

Metropolitan District.

Class of Factory	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Class 1.—Treating Raw Material, the Product of Pastoral Pursuits.												
(a) *Animal Products.*												
Boiling-down and tallow-refining	8	...	...	...	...	5	...	89	...	94	...	94
Glue	2	...	5	5	10	2	23	105	10	112	48	160
Tanning	68	16	...	33	...	50	...	777	...	876	...	876
Wool-scouring and fellmongering	18	7	..	34	3	68	7	873	9	982	19	1,001
Other animal products	8	33	...	28	...	12	...	102	1	175	1	176
Total	104	56	5	100	13	137	30	1,946	20	2,239	68	2,307
(b) *Vegetable Products.*												
Chaff-cutting	32	2	...	12	...	4	...	65	...	83	...	83
Total, Class 1	136	58	5	112	13	141	30	2,011	20	2,322	68	2,390
Class 2.—Oils and Fats—Animal and Vegetable.												
Oil and grease	10	5	...	11	...	27	...	170	...	213	...	213
Soap, candles, &c.	14	19	27	28	45	64	71	298	97	409	240	649
Total, Class 2	24	24	27	39	45	91	71	468	97	622	240	862

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.												
Asphalt	7	...	...	1	...	6	...	27	...	34	...	34
Bricks and tiles	70	101	...	146	...	174	6	1,725	14	2,146	20	2,166
Glass and glass bottles	9	6	...	34	...	140	...	703	...	883	...	883
Glass (ornamental)	26	14	...	64	1	55	...	268	...	401	1	402
Lime, plaster, and cement	9	...	...	4	...	5	...	178	...	187	...	187
Marble and slate	10	...	...	8	..	8	...	187	...	203	...	203
Modelling and fibrous plaster	22	4	...	19	...	39	...	160	...	222	...	222
Monumental masonry	20	...	...	4	...	8	...	149	...	161	...	161
Pottery and earthenware	17	58	...	44	2	56	...	491	22	649	24	673
Stone-dressing	21	...	...	2	...	4	...	230	...	236	...	236
Other works	21	2	...	6	1	33	...	291	...	332	1	333
Total, Class 3	232	185	...	332	4	528	6	4,409	36	5,454	46	5,500
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	1	...	.....	...	.....	...	.....	4	.....	4	.....	4
Boxes and packing-cases	56	24	.....	72	.....	69	.. ...	505	.....	670	.....	670
Cooperage..	12	7	.....	27	.....	27	.....	253	.....	314	... ..	314
Joinery	197	51	.....	170	.....	216	.....	1,748	2	2,185	2	2,187
Saw-milling—Timber	61	23	.....	107	... ..	126	3	1,003	1	1,259	4	1,263
Firewood	59	...	... .	2	.....	4	.....	129	.....	135	.....	135
Wood-turning	20	10	.....	8	.....	10	.....	56	.....	84	.....	84
Other works	32	4	1	14	.....	26	.. ...	117	.....	161	1	162
Total, Class 4	438	119	1	400	.....	478	3	3,815	3	4,812	7	4,819
CLASS 5.—METAL WORKS, MACHINERY, &c.												
Agricultural implements	11	5	.....	20	.....	30	.. ...	190	.....	245	.....	245
Brass and copper	59	18	3	71	8	101	6	491	4	681	21	702
Cutlery	29	5	.....	20	.....	21	.....	82	.....	128	.....	128
Engineering	273	103	1	453	10	897	28	4,218	16	5,671	55	5,726
Galvanised iron	37	31	.....	57	.....	60	.....	418	1	566	1	567
Iron works, foundries, and boiler-making	106	44	.....	153	1	194	5	2,192	17	2,583	23	2,606
Iron safes and doors	3	...	.....	8	.....	6	.....	62	.....	76	.....	76
Lead-mills	2	...	.....	...	.....	3	.....	22	.....	25	.....	25
Railway carriage works	4	7	.....	25	.....	50	.....	259	.....	341	.....	341
Smelting and ore dressing	6	1	.....	2	... ..	11	.....	103	.....	117	.... .	117
Stoves and ovens	19	10	.....	49	1	69	6	460	3	588	10	598
Tinsmithing	23	97	6	143	33	155	54	621	82	1,016	175	1,191
Wire-working	16	24	.....	72	.. ...	112	.....	510	.....	718	.....	718
Other metal works	91	64	5	132	35	162	25	858	20	1,216	85	1,301
Plumbing	18	2	.....	17	.. ...	22	.....	215	.....	256	.....	256
Farriery	25	...	.....	4	.....	7	.....	76	.....	87	.....	87
Total, Class 5	722	411	15	1,226	88	1,900	124	10,777	143	14,314	370	14,684
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(a) *Animal Food.*												
Bacon	9	...	.. ...	1	.....	6	... ..	102	.....	109	.....	109
Butchers' small goods	365	4	.....	11	.....	32	.. ...	549	.....	596	.....	596
Margarine	3	3	.....	3	.....	22	.....	101	.....	129	.....	129
Meat-preserving	8	10	1	17	4	35	5	793	29	855	39	894
Total	385	17	1	32	4	95	5	1,545	29	1,689	39	1,728
(b) *Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.*												
Biscuits	8	200	133	114	184	79	217	252	269	645	803	1,448
Bread and pastry	458	39	3	137	5	166	14	1,401	84	1,743	106	1,849
Confectionery	153	41	135	101	229	93	362	485	276	720	1,002	1,722
Corn-flour and oatmeal	8	1	4	2	15	4	22	95	38	102	79	181
Flour-milling	20	...	.. ...	5	... .	20	.....	291	.. ...	316	.....	316
Jam and fruit preserving	19	6	6	16	16	51	33	288	221	361	276	637
Pickles, sauces, and vinegar	11	5	1	4	13	15	17	56	99	80	130	210
Poultry foods and dog biscuits	8	3	.....	10	.....	5	.....	142	1	160	1	161
Self-raising flour	4	...	7	5	6	6	21	9	13	20	47	67
Sugar-refining	2	3	2	5	.....	17	7	278	9	303	18	321
Total	691	298	291	399	468	456	693	3,297	1,010	4,450	2,462	6,912
(c) *Drinks and Stimulants.*												
Aerated waters and cordials	26	3	2	49	18	77	29	255	23	384	72	456
Brewing	7	...	.. ...	5	.....	28	.....	780	.....	813	.....	813
Condiments, coffee, spices, &c.	34	55	109	46	175	58	239	351	241	510	764	1,274
Distillery	2	...	.....	...	.....	...	.....	47	.....	47	.....	47
Ice and refrigerating	69	1	.....	17	... ..	17	.. ...	455	.....	490	.....	490
Tea blending and packing	17	42	23	22	31	21	54	87	48	172	156	328
Wine, spirits, and beer bottling	28	...	. ...	27	2	32	10	244	56	303	68	371
Total	183	101	134	166	226	233	332	2,219	368	2,719	1,060	3,779
(d) *Narcotics.*												
Tobacco, cigars, and cigarettes	17	44	116	110	150	126	330	488	654	768	1,250	2,018
Total, Class 6	1,276	460	542	707	848	910	1,360	7,549	2,061	9,626	4,811	14,437

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(a) *Textile.*												
Woollen mills	10	51	85	60	111	70	215	668	481	849	892	1,741
(b) *Dress.*												
Boots and shoes—Order made ...	330	17	.....	40	2	48	1	607	10	712	13	725
Factory made ...	95	166	328	172	295	190	341	2,188	1,042	2,716	2,006	4,722
Clothing—Men's slops	80	25	283	39	372	54	387	489	1,268	607	2,310	2,917
Women's slops	159	6	272	5	471	17	459	89	1,525	117	2,727	2,844
Tailoring	258	14	209	27	377	44	378	907	1,759	992	2,723	3,715
Corsets	11	4	109	3	115	6	171	16	230	29	625	654
Dressmaking and millinery—												
Makers' material	130	5	275	5	513	4	555	25	1,166	39	2,509	2,548
Customers' material	161	...	83	...	140	...	138	...	395	...	756	756
Dye Works	25	1	2	11	3	19	14	92	90	123	109	232
Furriery	15	3	4	9	16	9	26	29	54	50	100	150
Hats and caps	30	43	73	48	129	52	173	248	282	391	657	1,048
Hosiery and knitting	67	47	325	85	484	103	608	229	701	464	2,118	2,582
Oilskin and waterproof clothing ...	12	1	5	1	7	2	15	30	49	34	76	110
Shirts, ties, and scarves	37	10	260	23	273	14	330	64	666	111	1,529	1,640
Umbrellas	8	10	12	4	26	6	23	24	45	44	106	150
Underclothing	86	2	120	7	215	6	246	22	578	37	1,159	1,196
Wigs and hair work	10	..	3	...	6	...	9	2	24	2	42	44
Total	1,514	354	2,363	479	3,444	574	3,874	5,061	9,884	6,468	19,565	26,033
(c) *Fibrous Materials and Textiles not elsewhere included.*												
Bags and sacks	8	6	40	13	31	14	79	89	97	122	247	369
Rope and twine...	10	11	6	105	18	29	15	97	9	242	48	290
Tents and tarpaulins	7	10	4	9	5	6	12	46	60	71	81	152
Total	25	27	50	127	54	49	106	232	166	435	376	811
Total, Class 7 ...	1,549	432	2,498	666	3,609	693	4,195	5,961	10,531	7,752	20,833	28,585
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	20	3	2	10	5	15	4	73	12	101	23	124
Electrotyping and stereotyping, type founding, and printers' materials	21	5	5	16	13	13	8	88	5	122	31	153
Paper bags and boxes	10	34	120	37	175	34	185	136	238	241	718	959
Paper mills, cardboard, and strawboard	6	17	21	20	30	15	33	251	45	303	129	432
Photo-engraving, photo-lithography, and photo. materials	53	7	25	29	49	23	74	156	170	215	318	533
Printing, bookbinding, and manufacturing stationery	301	189	207	404	341	383	371	3,204	701	4,180	1,620	5,800
Total, Class 8 ...	411	255	380	516	613	483	675	3,908	1,171	5,162	2,839	8,001
CLASS 9.—MUSICAL INSTRUMENTS, &C												
Pianos, organs, and sewing-machines	26	20	2	58	7	74	14	448	15	600	38	638
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	5	2	.....	2	2	3	.. ...	12	1	19	3	22
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY HARNESS, &C.												
Coaches and waggons	79	12	.....	59	.. ...	85	.....	525	.....	672	.....	672
Cycles and motor cars	286	60	.....	245	8	388	8	2,026	30	2,719	46	2,765
Perambulators, &c.	8	13	.....	11	1	18	1	94	4	136	6	142
Saddlery, harness, &c.	35	15	3	23	6	15	7	279	33	332	49	381
Naves, spokes, &c.	4	1	.....	1	.....	19	.....	59	.....	80	.....	80
Whips	2	...	.....	1	.....	1	.....	9	.....	11	.....	11
Total, Class 11 ...	414	101	3	331	15	526	16	2,992	67	3,950	101	4,051
CLASS 12.—SHIPBUILDING FITTINGS, &C.												
Docks and slips	3	1	.....	40	.....	89	.....	371	.....	501	.....	501
Sailmaking	5	1	.....	1	1	1	.....	24	16	27	17	44
Ship and boat building	27	4	.....	29	.....	67	.....	505	.....	605	.....	605
Total, Class 12 ...	35	6	.....	70	1	157	.. ...	900	16	1,133	17	1,150

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females	Total
CLASS 13.—FURNITURE, BEDDING, &c.												
Bedding, flock, and upholstery ...	43	19	21	57	34	62	49	346	220	484	334	818
Carpet-sewing	5	...	2	...	2	1	11	16	37	17	52	69
Iron bedsteads	5	20	.....	27	.....	30	.....	223	.. ...	300	.....	300
Billiard tables	2	11	.....	10	.....	5	.....	81	.....	107	.....	107
Chair-making	15	11	.....	38	.....	44	.....	155	.. ...	218	.....	248
Furniture and cabinet making—												
European	177	86	1	279	1	297	3	1,570	11	2,232	16	2,248
Chinese	38	...	.....	...	.....	3	.....	293	.....	296	.....	296
Bamboo and wicker	16	5	.....	6	.....	10	.....	142	.....	163	.. ...	163
Picture frames	27	7	4	9	4	9	3	76	19	101	30	131
Window blinds	7	9	6	6	6	10	1	58	22	83	35	118
Total, Class 13 ...	335	168	34	432	47	471	67	2,960	319	4,031	467	4,498
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c. ...	15	11	54	11	59	8	80	68	49	98	242	340
Chemical works and drugs	61	36	56	53	110	40	141	331	221	460	528	988
Fertilisers	6	...	.....	...	.....	1	.....	33	.....	34	.....	34
Perfumes and essences...	18	8	28	16	49	12	57	34	31	70	165	235
Paints and varnishes	21	53	6	35	9	38	19	398	18	524	52	576
Other minor works	5	1	3	1	2	5	3	18	1	25	9	34
Total, Class 14 ..	126	109	147	116	229	104	300	882	320	1,211	996	2,207
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	26	3	12	11	11	11	9	68	13	93	45	138
Surgical instruments	5	...	.....	4	.....	2	3	25	6	31	9	40
Other minor works	4	...	.....	1	.....	1	... ..	4	.....	6	.....	6
Total, Class 15 ...	35	3	12	16	11	14	12	97	19	130	54	184
CLASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.												
Electroplating	28	8	.....	33	1	27	1	204	1	272	3	275
Jewellery	73	8	7	32	9	84	18	412	46	536	80	616
Total, Class 16 ...	101	16	7	65	10	111	19	616	47	808	83	891
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	81	27	1	129	3	231	5	516	3	903	12	915
Electric light and power works* ...	78	1	.....	4	.....	15	.....	406	.....	426	.....	426
Gas works	8	5	.....	16	.....	15	.....	865	.....	901	.....	901
Lamps and gas mantles	8	2	4	5	31	7	45	50	49	64	129	193
Hydraulic power	3	...	.....	1	.....	1	.....	26	.....	28	.....	28
Coke works	3	...	.....	3	.....	6	.....	85	.....	94	.....	94
Total, Class 17 ..	181	35	5	158	34	275	50	1,948	52	2,416	141	2,557
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy leather	24	28	22	30	46	29	56	223	64	310	188	493
Leather belting	7	6	.....	8	.....	11	.....	45	.....	70	.....	70
Portmanteaux	15	38	9	48	25	55	29	222	41	363	104	467
Other minor works	22	29	23	9	24	13	35	56	25	107	107	214
Total, Class 18 ...	68	101	54	95	95	108	120	546	130	850	399	1,249
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting ..	8	1	3	6	3	8	.....	127	14	142	20	162
Brooms, brushes	24	12	15	24	19	42	10	163	29	241	73	314
Florists and seedsmen	8	5	10	...	7	4	13	24	9	33	39	72
Laundries—European†	128	1	46	2	120	9	289	161	945	173	1,400	1,573
Chinese	20	...	.....	...	4	...	.....	28	10	28	14	42
Rubber goods	8	28	40	33	58	36	140	481	376	578	614	1,192
Toys	26	11	6	12	11	14	6	67	9	104	32	136
Painting and sign-writing	9	2	.....	8	2	13	.....	134	.....	157	2	159
Other minor works	22	9	7	30	29	51	22	130	37	220	95	315
Total, Class 19 ...	253	69	127	115	253	177	480	1,315	1,429	1,676	2,289	3,965
Total, All Industries ...	6,367	2,574	3,859	5,456	5,924	7,244	7,542	51,614	16,477	66,888	33,802	100,690

* These figures include 66 electric lighting plants for picture shows, employing 66 persons.
† Charitable institutions doing outside laundry work are now included in the number of factories registered.

Appendix V.

Persons employed, by Class of Factory—1918–22.

Class of Factory.	1918.	1919.	1920.	1921.	1922.
Metropolitan District.					
I. Treating raw material, product of pastoral pursuits	2,678	2,613	2,502	2,185	2,390
II. Oils and fats—animal, vegetable, &c.	667	835	735	849	862
III. Processes relating to stone, clay, glass, &c.	4,414	5,250	6,724	5,210	5,500
IV. Working in wood	3,783	4,296	4,567	4,259	4,819
V. Metal works, machinery, &c.	9,830	11,818	14,856	14,185	14,684
VI. Connected with food and drink, &c.	13,516	14,915	14,397	13,775	14,437
VII. Clothing and textile fabrics, &c.	23,551	24,994	25,600	26,145	28,585
VIII. Books, paper, printing, engraving, &c.	6,813	6,840	7,252	7,444	8,001
IX. Musical instruments, &c.	428	496	563	472	638
X. Arms and explosives	21	33	30	17	22
XI. Vehicles and fittings, saddlery, harness, &c.	2,748	2,740	3,540	3,371	4,051
XII. Ship and boat building, &c.	2,135	2,180	2,968	1,869	1,150
XIII. Furniture, bedding, &c.	3,739	4,193	4,439	3,924	4,498
XIV. Drugs, chemicals, and by-products	1,807	2,013	2,173	2,085	2,207
XV. Surgical and other scientific instruments	166	143	146	155	184
XVI. Jewellery and plated-ware, &c.	765	837	975	861	891
XVII. Heat, light, and power	3,074	3,284	3,497	3,279	2,557
XVIII. Leatherware (excepting saddlery and harness)	965	1,238	1,079	1,147	1,249
XIX. Minor wares, n.e.i.	3,400	3,621	3,810	3,927	3,965
Total	84,500	92,339	99,853	95,159	100,690
Newcastle District.					
I. Treating raw material, product of pastoral pursuits	82	113	133	177	131
II. Oils and fats—animal, vegetable, &c.	209	203	175	219	195
III. Processes relating to stone, clay, glass, &c.	304	355	507	431	382
IV. Working in wood	998	1,364	1,424	1,396	1,347
V. Metal works, machinery, &c.	3,893	5,049	6,089	6,587	2,490
VI. Connected with food and drink, &c.	1,047	1,274	1,221	1,283	1,273
VII. Clothing and textile fabrics, &c.	1,006	1,085	1,209	1,269	1,366
VIII. Books, paper, printing, engraving, &c.	255	253	272	280	260
IX. Musical instruments, &c.	6	7	8	7	8
XI. Vehicles and fittings, saddlery, harness, &c.	288	289	377	354	392
XII. Ship and boat building, &c.	40	61	99	101	55
XIII. Furniture, bedding, &c.	155	181	205	218	209
XIV. Drugs, chemicals, and by-products	.....	48	42	43	80
XV. Surgical and other scientific instruments	1	1	... ..	5	5
XVI. Jewellery and plated-ware, &c.	17	21	23	30	16
XVII. Heat, light and power	199	535	570	774	263
XIX. Minor wares, n.e.i.	142	159	137	130	99
Total	8,642	10,998	12,511	13,304	8,571
Rest of State.					
I. Treating raw material, product of pastoral pursuits	400	420	339	371	381
II. Oils and fats—animal, vegetable, &c.	21	18	19	26	22
III. Processes relating to stone, clay, glass, &c.	1,147	1,358	1,473	1,494	1,329
IV. Working in wood	1,767	1,946	2,216	2,238	2,261
V. Metal work, machinery, &c.	1,862	2,034	2,526	2,080	2,150
VI. Connected with food and drink, &c.	3,223	3,313	2,713	3,010	3,024
VII. Clothing and textile fabrics, &c.	1,424	1,510	1,408	1,467	1,495
VIII. Books, paper, printing, engraving, &c.	661	622	650	703	681
XI. Vehicles and fittings, saddlery, harness, &c.	1,465	1,461	1,390	1,547	1,439
XII. Ship and boat building, &c.	.....	11	.....	.....	.....
XIII. Furniture, bedding, &c.	73	89	120	126	124
XIV. Drugs, chemicals, and by-products	14	16	3	28	46
XV. Surgical and other scientific instruments	.. ...	.....	1	3	2
XVI. Jewellery and plated-ware, &c.	9	9	4	13	12
XVII. Heat, light and power	633	630	677	700	718
XIX. Minor wares, n.e.i.	124	131	142	115	132
Total	12,823	13,568	13,681	13,921	13,816
State.					
I. Treating raw material, product of pastoral pursuits	3,160	3,146	2,974	2,733	2,902
II. Oils and fats—animal, vegetable, &c.	897	1,056	929	1,094	1,079
III. Processes relating to stone, clay, glass, &c.	5,865	6,963	8,704	7,135	7,211
IV. Working in wood	6,548	7,606	8,207	7,893	8,427
V. Metal work, machinery, &c.	15,585	18,901	23,471	22,852	19,324
VI. Connected with food and drink, &c.	17,786	19,502	18,331	18,068	18,734
VII. Clothing and textile fabrics, &c.	25,981	27,589	28,217	28,881	31,446
VIII. Books, paper, printing, engraving, &c.	7,729	7,715	8,174	8,427	8,942
IX. Musical instruments, &c.	434	503	571	579	646
X. Arms and explosives	21	33	30	17	22
XI. Vehicles and fittings, saddlery harness, &c.	4,501	4,490	5,307	5,272	5,881
XII. Ship and boat building, &c.	2,175	2,252	3,067	1,970	1,205
XIII. Furniture, bedding, &c.	3,967	4,463	4,764	4,268	4,831
XIV. Drugs, chemicals, and by-products	1,821	2,077	2,218	2,156	2,333
XV. Surgical and other scientific instruments	167	144	147	163	191
XVI. Jewellery and plated-ware, &c.	791	867	1,002	904	919
XVII. Heat, light, and power	3,906	4,449	4,744	4,753	3,539
XVIII. Leatherware (excepting saddlery and harness)	965	1,238	1,079	1,147	1,249
XIX. Minor wares, n.e.i.	3,666	3,911	4,109	4,172	4,196
Total	105,965	116,905	126,045	122,384	123,077

Appendix VI.

Persons employed, by Age Groups—1918-1922.

Metropolitan District.

Year.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		Over 21 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1918	4,942	2,092	2,795	4,339	4,559	4,755	6,395	44,169	15,396	55,355	29,145	84,500
1919	5,330	2,383	3,159	4,609	4,818	5,649	6,737	49,389	15,595	62,030	30,309	92,339
1920	5,842	2,456	3,392	5,201	5,086	6,459	6,948	54,467	15,844	68,583	31,270	99,853
1921	5,934	2,449	3,425	5,341	5,561	6,210	6,934	49,850	15,389	63,850	31,309	95,159
1922	6,367	2,574	3,859	5,456	5,924	7,244	7,542	51,614	16,477	66,888	33,802	100,690

Newcastle District.

1918	810	238	122	492	261	436	302	6,335	456	7,501	1,141	8,642
1919	866	259	152	630	250	569	309	8,400	429	9,858	1,140	10,998
1920	936	302	174	732	315	652	337	9,548	451	11,234	1,277	12,511
1921	1,017	194	170	734	323	754	351	10,307	471	11,989	1,315	13,304
1922	1,100	161	181	620	384	730	377	5,671	447	7,182	1,389	8,571

Rest of State.

1918	2,594	270	48	758	178	818	228	10,017	506	11,863	960	12,823
1919	2,807	307	72	686	209	955	217	10,638	493	12,586	982	13,568
1920	2,967	282	70	660	187	844	211	10,963	464	12,749	932	13,681
1921	3,136	260	70	748	170	861	239	11,111	462	12,980	941	13,921
1922	3,207	257	95	815	217	879	214	10,914	425	12,865	951	13,816

State.

1918	8,346	2,600	2,965	5,589	4,998	6,009	6,925	60,521	16,358	74,719	31,246	105,965
1919	9,003	2,949	3,383	5,925	5,268	7,173	7,263	68,427	16,517	84,474	32,431	116,905
1920	9,745	3,040	3,636	6,593	5,588	7,955	7,496	74,978	16,759	92,566	33,479	126,045
1921	10,087	2,903	3,665	6,823	6,054	7,825	7,524	71,268	16,322	88,819	33,565	122,384
1922	10,674	2,992	4,135	6,891	6,525	8,853	8,133	68,199	17,349	86,935	36,142	123,077

Appendix VII.

Horse-power of Machinery, by Class of Factory and Method of Production, Classified by Industry, 1922.

METROPOLITAN DISTRICT

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 1.—TREATING RAW MATERIALS, &c.									
Boiling-down and tallow refining	5	99	80	1	120	60	4	171	140
Glue	1	802	352	...	.....	.....	2	454	328
Tanning	20	591	344	13	451	308	46	1,524	1,265
Woolscouring and fellmongering and packing skins	12	1,723	1,396	2	22	16	16	1,632	1,196
Chaff-cutting	...	8	...	3	30	18	24	584	491
Total	38	3,223	2,172	19	623	402	92	4,365	3,420
CLASS 2.—OILS AND FATS.									
Oil and grease	4	320	210	1	11	10	4	112	99
Soap and candles	4	750	303	...	.....	.....	7	1,470	1,094
Total	8	1,070	513	1	11	10	11	1,582	1,193
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.									
Asphalt	...	.....	.....	...	.....	.....	5	49	42
Bricks and tiles	35	5,002	3,426	10	914	590	33	3,741	2,858
Glass and glass bottles	2	560	380	...	.....	.....	6	353	164
Glass (ornamental)	...	.....	.....	1	4	2	19	261	200
Cement	1	3,200	2,300	...	.....	.....	4	250	168
Marble and slate	1	25	20	2	48	26	6	374	286
Modelling and fibrous plaster	...	.....	.....	...	.....	.....	15	86	84
Monumental masons	2	16	14	...	.....	.....	6	258	127
Pottery and earthenware	5	665	364	4	90	63	8	261	230
Stone-dressing	5	165	155	...	25	.....	12	593	508
Other works	1	50	30	2	365	150	11	920	692
Total	52	9,683	6,689	19	1,446	831	125	7,146	5,359
CLASS 4.—WORKING IN WOOD.									
Incubators	...	.....	.....	...	.....	.....	1	2	2
Boxes and packing-cases	3	742	580	1	1	1	48	901	700
Cooperage	...	.....	.....	...	.....	.....	10	269	267
Joinery	6	406	257	31	453	295	139	2,097	1,651
Saw-milling—timber	26	5,082	3,830	4	75	38	32	4,239	2,876
firewood	28	303	233	3	38	36	16	266	236
Wood-turning	...	.....	.....	3	15	14	14	188	149
Other works	...	.....	.....	3	23	23	24	682	503
Total	63	6,533	4,900	45	605	407	284	8,644	6,384
CLASS 5.—METAL WORKS, MACHINERY, &c.									
Agricultural implements	...	.....	.....	4	125	65	5	162	144
Brass and copper	1	260	230	3	63	51	49	353	298
Cutlery	...	.....	.....	...	.....	.....	29	270	221
Engineering	19	1,793	1,241	25	636	410	227	6,212	4,667
Galvanised iron	1	8	6	1	6	6	27	336	278
Iron works, foundries, and boiler-making	6	595	375	15	147	112	85	3,102	2,631
Iron safes and doors	...	.....	.....	...	.....	.....	3	39	37
Lead-mills	1	100	75	...	.....	.....	1	4	4
Railway carriage works	1	380	140	...	50	.....	2	164	130
Smelting and ore-dressing	1	32	24	...	.....	.....	6	616	172
Stoves and ovens	...	.....	.....	1	25	15	14	820	606
Tinsmithing	...	.....	.....	2	106	81	15	600	443
Wire-working	...	.....	.....	...	5	.....	12	1,594	1,565
Other metal works	...	.....	.....	4	354	264	69	1,264	773
Plumbing	...	.....	.....	1	3	1	7	29	26
Farriery	...	.....	.....	1	7	4	16	26	25
Total	30	3,168	2,091	57	1,527	1,009	567	15,591	12,020
CLASS 6.—CONNECTED WITH FOOD AND DRINK, &c.									
Bacon	4	200	170	...	.....	.....	7	191	180
Butchers' small-goods	7	86	66	34	247	195	352	1,792	1,622
Margarine	1	34	9	1	52	43	2	298	225
Meat-preserving	4	1,851	1,128	...	.....	.....	5	324	251
Biscuits	3	645	570	...	15	.....	8	809	702
Bread and pastry	3	15	9	18	110	92	160	1,113	957
Confectionery	4	224	128	5	119	92	72	1,538	1,173
Corn-flour and oatmeal	2	106	79	...	.....	.....	7	648	400
Flour-milling	2	430	380	1	120	20	14	2,822	2,377
Jam and fruit preserving	5	84	79	...	.....	.....	12	382	300
Pickles, sauces, and vinegar	2	14	10	...	.....	.....	5	50	44
Dog biscuits and poultry foods	1	150	140	...	.....	.....	6	375	324
Self-raising flour	...	.....	.....	1	3	3	4	45	43
Sugar refining	1	179	179	...	.....	.....	2	2,611	2,611
Aerated waters	3	25	17	3	18	10	20	510	384
Brewing	2	3,017	1,597	1	15	10	4	2,383	1,621
Condiments, Eastern goods, &c.	6	444	391	3	89	44	24	1,364	986
Distillery	...	10	.....	...	.....	.....	1	229	229
Ice and refrigerating	12	3,441	2,885	19	962	820	42	2,050	1,576
Tea-blending	...	...	...	..	.....	.....	13	231	188
Wines and spirits	1	70	40	1	42	20	13	61	46
Tobacco, cigars, &c.	1	250	230	...	25	.....	8	1,416	1,066
Total	64	11,255	8,107	87	1,817	1,349	781	21,222	17,305

Appendix VII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, &c.									
Woollen mills	6	1,153	1,023	1	200	160	6	1,980	1,743
Boots and shoes—order and repairing	...	.....	.. ...	10	29	25	299	413	371
factory made	1	270	180	5	213	162	80	1,281	1,195
Clothing—men's slops	...	.....	.....	...	8	.....	68	504	483
women's slops	...	.....	.....	1	4	4	122	297	266
tailoring	...	.....	.....	...	.. ...	.. ...	69	123	111
Corsets	...	.....	.....	...	.....	.....	7	94	94
Dressmaking—makers' materials	...	.. ...	.....	1	5	4	49	107	100
customers' materials	...	.....	.....	...	.....	.....	24	20	19
Dye works	6	58	49	...	...	... ..	17	141	108
Furriery	...	...	... ..	1	4	4	4	10	9
Hats and caps	5	448	318	...	.....	.....	26	589	540
Hosiery, knitting, &c.	1	5	5	...	3	.....	46	628	522
Oilskins and waterproof clothing	1	8	2	...	.....	.....	8	28	24
Shirts, ties, and scarfs	...	.....	.....	1	17	17	37	159	141
Umbrellas	...	.....	.....	...	.....	.....	6	16	11
Underclothing	...	.....	.....	...	.....	.....	68	193	166
Wigs and hairwork	...	.....	.....	...	.....	.....	1	1	1
Bags and sacks	...	.....	.....	...	.....	.....	6	297	230
Rope and twine	...	.....	.....	2	435	430	8	227	184
Tents and tarpaulins	..	.....	.....	...	.....	.....	7	129	108
Total	20	1,942	1,577	22	918	806	958	7,228	6,426
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.									
Die-sinking and engraving	...	.....	.....	...	.....	.....	16	63	60
Electro- and stereo-typing, printers' materials, &c.	...	.....	.....	2	8	5	15	252	211
Paper bags and boxes	...	.....	.. ...	2	41	26	8	230	194
Paper-mills	3	3,284	2,192	...	.....	.....	3	265	265
Photo.-engraving, photo. materials, &c.	...	.....	.....	...	.....	... ..	15	84	75
Printing, bookbinding, and stationery	3	164	110	39	578	405	249	5,597	4,308
Total	6	3,448	2,302	43	627	436	306	6,491	5,113
CLASS 9.—MUSICAL INSTRUMENTS, &c.									
Pianos and sewing-machines	...	.....	.....	1	75	75	14	334	314
CLASS 10.—ARMS AND EXPLOSIVES.									
Explosives	...	.....	.....	...	.....	.....	4	35	22
CLASS 11.—VEHICLES, SADDLERY, HARNESS, &c.									
Coaches and waggons	2	33	14	4	33	29	42	409	325
Cycles and motor-cars	2	14	13	20	80	62	229	1,613	1,340
Perambulators	...	.....	.....	..	.....	.....	5	27	20
Saddlery and harness	...	.....	.....	...	.....	.....	17	75	67
Naves and spokes	1	85	85	...	.....	.....	3	227	167
Whips	...	.....	.....	...	.....	.....	...	... ...	.....
Total	5	132	112	24	113	91	296	2,351	1,919
CLASS 12.—SHIPBUILDING, &c.									
Docks and slips	3	2,010	2,010	...	.....	.....	1	504	504
Sailmaking	...	.....	.....	...	.....	.....	4	12	10
Ship and boat building	3	115	73	3	58	34	17	401	346
Total	6	2,125	2,083	3	58	34	22	917	860
CLASS 13.—FURNITURE, BEDDING, &c.									
Bedding and flock	2	68	44	2	15	13	31	627	479
Carpet-sewing	...	.....	.....	1	11	8	1	17	12
Iron bedsteads	...	.....	.....	...	.....	.....	6	423	423
Billiard-tables	...	.....	.....	...	.....	.....	2	141	116
Chair-making	1	50	48	...	.. ..	.. ..	12	206	170
Furniture—European	1	40	40	12	191	171	141	2,275	1,990
Chinese	...	.....	... ..	...	.....	.....	16	168	153
Bamboo and Wicker	...	.. ...	.....	...	.....	.....	1	57	9
Picture frames	...	.....	.....	...	.....	.....	26	30	28
Window blinds	...	.....	.....	..	.....	.....	4	22	13
Total	4	158	132	15	217	192	240	3,966	3,393
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.									
Blue, baking-powder, soda, &c.	2	57	18	...	27	.....	12	390	281
Chemical works and drugs	6	125	74	1	16	5	43	1,012	723
Fertilisers	3	28	19	...	.....	.....	3	153	105
Perfumes and essences	...	.....	.....	...	.....	.....	12	105	89
Paints and varnishes	2	34	27	1	50	35	17	1,692	912
Other minor works	...	125	.....	...	... ..	.....	3	232	149
Total	13	369	138	2	93	40	90	3,584	2,259
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.									
Optical instruments	...	.....	.....	..	.....	.. ...	26	73	67
Surgical instruments	...	.....	.....	...	.....	.....	4	8	8
Other minor works	...	.....	.....	...	.....	.....	4	5	4
Total	...	.....	.....	...	.....	.....	34	88	79
CLASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.									
Electro-plating	...	.....	.....	2	40	30	28	262	229
Jewellery	...	.....	.....	...	.....	.....	66	352	233
Total	...	.....	.....	2	40	30	94	514	462

Appendix VII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 17.—LIGHT, HEAT, AND POWER.									
Electrical apparatus	...	.....	.....	...	.....	.....	71	665	399
Electric light and power works*	5	83,831	42,001	35	1,310	857	41	2,228	1,774
Gas	4	6,190	1,575	5	728	621	5	290	100
Lamps and gas mantles	...	.....	.....	...	.....	.....	6	94	87
Hydraulic power	1	1,675	822	...	.....	.....	1	25	20
Coke works	2	99	99	...	.....	.....	2	728	523
Total	12	91,795	44,897	40	2,038	1,478	126	4,030	2,903
CLASS 18.—LEATHERWARE (EXCEPTING SADDLERY AND HARNESS).									
Fancy leather	1	25	25	...	.....	.....	21	518	399
Leather belting	...	.....	.....	...	.....	.....	6	55	53
Portmanteaux and bags	...	.....	.....	1	16	5	12	80	70
Other minor works	...	.....	.....	...	.....	.....	15	49	49
Total	1	25	25	1	16	5	54	702	571
CLASS 19.—MINOR WARES (NOT ELSEWHERE INCLUDED).									
Baskets, &c.	...	.....	.....	...	.....	.....	2	10	8
Brooms and brushes	...	.....	.....	1	10	7	21	124	101
Florists and seedsmen	...	.....	.....	...	.....	.....	5	74	50
Laundries—European	11	246	175	13	102	89	92	887	779
,, Chinese	...	.....	.....	...	.....	.....	2	11	9
Rubber goods	1	289	250	...	.....	.....	6	824	733
Toys	...	.....	.....	6	19	15	17	87	74
Painting and signwriting	...	.....	.....	...	.....	.....	3	4	3
Other minor works	2	19	11	...	.....	.....	12	112	103
Total	14	554	436	20	131	111	160	2,133	1,860
Total, All Classes	336	135,480	76,174	401	10,355	7,306	4,258	90,923	71,862

*NOTE.—These figures include 41 gas plants using 494 h.-p., and 31 electric and oil plants using 377 h.-p., for lighting purposes at Picture Shows.

Appendix VIII.

Horse-power of Machinery used and Method of Production, by Class of Factory, 1922.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
METROPOLITAN DISTRICT.									
I. Treating raw materials, product of pastoral pursuits	38	3,223	2,172	19	623	402	92	4,365	3,420
II. Oils and fats—animal, vegetable, &c.	8	1,070	513	1	11	10	11	1,582	1,193
III. Processes in stone, clay, glass, &c.	52	9,683	6,689	19	1,446	831	125	7,146	5,359
IV. Working in wood	63	6,533	4,900	45	605	407	284	8,644	6,384
V. Metal works, machinery, &c.	30	3,168	2,091	57	1,527	1,009	567	15,591	12,020
VI. Connected with food and drink, &c.	64	11,255	8,107	87	1,817	1,349	781	21,222	17,305
VII. Clothing and textile fabrics, &c.	20	1,942	1,577	22	918	806	958	7,228	6,426
VIII. Books, paper, printing, and engraving, &c.	6	3,448	2,302	43	627	456	306	6,491	5,113
IX. Musical instruments, &c.	...	...	...	1	75	75	14	334	314
X. Arms and explosives	...	...	...	...	...	...	4	35	22
XI. Vehicles and fittings, saddlery and harness, &c.	5	132	112	24	113	91	296	2,351	1,919
XII. Ship and boat building, &c.	6	2,125	2,083	3	58	34	22	917	860
XIII. Furniture, bedding, &c.	4	158	132	15	217	192	240	3,966	3,393
XIV. Drugs, chemicals, and by-products	13	369	138	2	93	40	90	3,584	2,259
XV. Surgical and other scientific instruments	...	...	...	...	...	...	34	88	79
XVI. Jewellery and plated-ware, &c.	...	...	...	2	40	30	94	514	462
XVII. Heat, light, and power	12	91,795	44,897	40	2,038	1,478	126	4,030	2,903
XVIII. Leatherware, n.e.i.	1	25	25	1	16	5	54	702	571
XIX. Minor wares, n.e.i.	14	554	436	20	131	111	160	2,133	1,860
Total	336	135,480	76,174	401	10,355	7,306	4,258	90,923	71,862
NEWCASTLE DISTRICT.									
I. Treating raw materials, product of pastoral pursuits	1	210	210	1	12	12	7	491	244
II. Oils and fats—animal, vegetable, &c.	2	240	132	...	...	...	2	109	86
III. Processes in stone, clay, glass, &c.	16	1,025	530	2	80	78	11	558	151
IV. Working in wood	110	3,613	2,579	8	79	77	46	584	508
V. Metal works, machinery, &c.	10	38,250	2,177	11	152	108	34	32,505	6,964
VI. Connected with food and drink, &c.	42	2,601	1,550	42	610	397	142	1,850	1,395
VII. Clothing and textile fabrics, &c.	1	15	12	3	17	12	36	137	111
VIII. Books, paper, printing and engraving, &c.	...	...	...	9	154	121	22	164	133
XI. Vehicles and fittings, saddlery and harness, &c.	6	142	107	14	105	78	55	172	143
XII. Ship and boat building, &c.	5	91	78	2	7	6	...	5	...
XIII. Furniture, bedding, &c.	1	8	4	8	65	47	14	169	136
XIV. Drugs, chemicals, &c.	...	10	...	...	...	...	1	22	10
XV. Surgical and other scientific instruments	...	...	...	...	...	...	3	2	2
XVI. Jewellery and plated-ware, &c.	...	...	...	...	...	...	2	9	7
XVII. Heat, light, and power	7	1,181	493	17	499	412	29	461	324
XIX. Minor wares, n.e.i.	3	46	33	2	30	22	3	25	15
Total	204	47,432	7,905	119	1,810	1,376	391	37,243	10,229

Appendix VIII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
Rest of State.									
I. Treating raw materials, products of pastoral pursuits	45	943	683	11	300	218	21	258	208
II. Oils and fats—animal, vegetable, &c.	4	30	15	...	...	...	...	..	...
III. Processes in stone, clay, glass, &c.	29	5,653	3,186	8	602	576	30	397	267
IV. Working in wood	283	7,154	5,094	37	685	496	94	1,010	774
V. Metal works, machinery, &c.	14	7,453	5,854	32	301	215	47	5,878	3,726
VI. Connected with food and drink, &c.	163	9,624	6,625	175	4,017	3,029	348	2,158	1,739
VII. Clothing and textile fabrics, &c.	2	145	140	12	81	71	46	125	106
VIII. Books, paper, printing, engraving, &c.	2	27	19	51	291	179	103	376	296
XI. Vehicles and fittings, saddlery and harness, &c. ...	9	142	95	89	588	412	205	886	719
XIII. Furniture, bedding, &c.	2	31	18	9	68	57	20	118	82
XIV. Drugs, chemicals, &c.	2	29	7	1	4	4	1	500	415
XV. Surgical and other scientific instruments, &c. ...	...	...	...	...	...	...	1	1	1
XVI. Jewellery and plated-ware, &c.	...	...	...	1	4	3	1	2	2
XVII. Heat, light, and power...	38	6,468	5,380	74	3,471	2,656	111	2,843	2,265
XIX. Minor wares, n.e.i.	7	78	64	4	19	15	4	34	31
Total	600	37,777	27,180	504	10,431	7,931	1,032	14,586	10,631
State.									
I. Treating raw materials, product of pastoral pursuits	84	4,376	3,065	31	935	632	120	5,114	3,872
II. Oils and fats—animal, vegetable, &c.	14	1,340	660	1	11	10	13	1,691	1,279
III. Processes in stone, clay, glass, &c.	97	16,361	10,405	29	2,128	1,485	166	8,101	5,777
IV. Working in wood	456	17,300	12,573	90	1,369	980	424	10,238	7,666
V. Metal works, machinery, &c.	54	48,871	10,122	100	1,980	1,332	648	53,974	22,710
VI. Connected with food and drink, &c.	269	23,480	16,282	304	6,444	4,775	1,271	25,210	20,439
VII. Clothing and textile fabrics, &c.	23	2,102	1,729	37	1,016	889	1,040	7,490	6,643
VIII. Books, paper, printing, and engraving, &c. ...	8	3,475	2,321	103	1,072	736	431	7,031	5,542
IX. Musical instruments, &c.	...	...	...	1	75	75	14	334	314
X. Arms and explosives, &c.	...	...	...	...	..	...	4	35	22
XI. Vehicles and fittings, saddlery and harness, &c. ...	20	416	314	127	806	581	539	3,407	2,779
XII. Ship and boat building, &c.	11	2,216	2,161	5	65	40	22	922	860
XIII. Furniture, bedding, &c.	7	197	154	32	350	296	274	4,253	3,611
XIV. Drugs, chemicals, and by-products	15	403	145	3	97	44	92	4,106	2,684
XV. Surgical and other scientific instruments	...	..	...	...	...	...	38	91	82
XVI. Jewellery and plated-ware, &c.	...	...	...	3	44	33	97	525	471
XVII. Heat, light, and power	57	99,444	50,770	131	6,008	4,546	267	7,336	5,494
XVIII. Leatherware, n.e.i.	1	25	25	1	16	5	54	702	571
XIX. Minor wares, n.e.i.	24	678	533	26	180	148	167	2,192	1,906
Total	1,140	220,689	111,259	1,024	22,596	16,607	5,681	142,752	92,722

Appendix IX.

Horse-power of Machinery used and Method of Production—1918–1922.

Year.	Steam.		Gas.		Electricity and other.		Total.	
	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	*No. of Factories.	Horse-power.
Metropolitan District.								
1918	404	70,446	501	9,282	2,960	49,810	3,865	129,538
1919	399	70,286	538	9,920	3,087	51,633	4,024	131,839
1920	421	77,695	494	9,618	3,602	58,155	4,517	145,468
1921	382	80,969	432	8,160	3,920	65,009	4,734	154,138
1922	336	76,174	401	7,306	4,258	71,862	4,995	155,342
Newcastle District.								
1918	199	19,407	107	1,014	241	8,637	547	29,058
1919	211	20,071	103	1,023	261	9,863	575	30,957
1920	235	30,671	113	1,308	290	6,555	638	38,534
1921	229	30,454	117	1,186	334	9,863	680	41,503
1922	204	7,905	119	1,370	391	10,229	714	19,504
Rest of State.								
1918	525	26,709	465	8,319	764	9,240	1,754	44,268
1919	530	25,520	473	7,088	805	10,863	1,808	43,471
1920	582	29,893	462	7,258	857	7,237	1,901	44,388
1921	594	27,507	490	6,966	933	8,456	2,017	42,929
1922	600	27,180	504	7,931	1,032	10,631	2,136	45,742
State.								
1918	1,128	116,562	1,073	18,615	3,965	67,667	6,166	202,864
1919	1,140	115,877	1,114	18,031	4,153	72,359	6,407	206,267
1920	1,238	138,259	1,069	18,184	4,749	71,947	7,056	228,390
1921	1,205	138,930	1,039	16,312	5,187	83,328	7,431	238,570
1922	1,140	111,259	1,024	16,607	†5,681	†92,722	7,845	220,588

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using power.

† Including 69 factories using oil of 1,035 horse-power (Metropolitan District).
" 123 " " 691 " (Newcastle District).
" 528 " " 2,480 " (Rest of State).
720 " " 4,261 " (State).

Appendix X.

Employment of Children.

Certificates of Fitness by class of Factory in Districts, 1922.

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Class 1.—Treating Raw Material—the Products of Pastoral Pursuits.									
Tanneries	47	...	...	...	...	...	...	...	47
Wool scouring	8	1	...	...	...	...	...	...	9
Class 2.—Oils and Fats—Animal and Vegetable.									
Kerosene and oil	19	...	...	...	...	...	...	...	19
Soap, &c.	46	57	8	10	...	...	...	...	121
Class 3.—Processes in Stone, Clay, Glass, &c.									
Glass and bottles	41	...	...	...	...	...	...	...	41
Marble and slate	1	...	...	...	...	...	...	...	1
Potteries and bricks	179	3	4	...	...	...	1	...	187
Lime and cement	12	...	...	...	...	...	1	2	15
Class 4.—Working in Wood.									
Sawmills and joinery	123	2	29	...	...	...	9	...	163
Class 5.—Metal Works and Machinery, &c.									
Brass and copper	30	1	...	...	...	...	...	...	31
Engineering	184	6	18	...	...	...	3	...	211
Ironworks, stoves, &c.	90	...	29	...	...	...	...	...	119
Smelting and ore works	11	...	15	...	...	...	27	...	53
Wire works	37	1	...	...	...	...	...	...	38
Class 6.—Connected with Food and Drink, and the Preparation thereof.									
Aerated waters	7	3	3	...	12	...	...	...	25
Biscuits	357	173	8	2	...	...	...	...	540
Bread and pastry	27	1	11	...	...	...	3	...	42
Breweries	3	...	...	...	...	...	2	...	5
Condiments	24	31	5	13	...	...	...	...	73
Confectionery	139	198	4	1	...	...	1	2	345
Flour mills	1	4	...	...	...	...	5	...	10
Groceries and packing	68	96	...	...	...	...	3	3	170
Ice and refrigerating	4	...	13	...	...	...	1	...	18
Jam	13	10	...	...	...	...	...	...	23
Meat preserving	18	....	18	...	...	...	...	...	36
Sugar Mills	1	1	...	...	...	...	...	...	2
Tobacco	78	130	...	...	...	...	...	...	208
Class 7.—Clothing and Textile Fabrics, and Fibrous Materials.									
Artificial flowers	.....	9	...	...	...	...	...	...	9
Boots and shoes	178	267	1	1	5	...	4	14	470
Calico bags	6	14	...	...	...	...	...	...	20
Clothing	38	478	6	211	...	...	...	14	747
Corsets	1	129	...	...	...	...	...	...	130
Dressmaking	5	427	...	...	...	...	...	5	437
Hats and caps	52	182	...	...	...	...	...	...	234
Hosiery and knitting	52	374	...	...	...	...	...	...	426
Rope	36	10	...	...	...	...	3	...	49
Shirts	8	334	...	24	...	...	1	...	367
Tents, &c.	8	3	...	...	...	...	...	...	11
Umbrellas	9	12	...	...	...	...	...	...	21
Whiteworking	2	139	...	...	...	...	...	...	141
Woollen mills	37	57	...	...	...	...	15	...	109
Class 8.—Books, Papers, Printing, Engraving.									
Bookbinding	17	94	7	3	...	...	...	...	121
Paper boxes	61	89	...	2	...	...	...	...	152
Paper mills	8	6	...	...	...	...	...	...	14
Photography	3	20	...	...	...	...	1	...	24
Printing	295	68	18	...	4	...	10	...	395
Type founding	6	3	...	...	...	...	...	...	9
Class 9.—Musical Instruments, &c. Pianos, Organs and Sewing Machine									
Musical instruments	27	1	...	...	...	...	...	...	28
Class 11.—Vehicles and Fittings, Saddlery, Harness, &c.									
Coachbuilding	11	...	9	...	1	...	4	...	25
Motors and cycles	29	...	...	...	...	...	8	...	37
Class 13.—Furniture, Bedding, &c.									
Bedsteads, bedding	21	5	...	...	...	...	...	...	26
Furniture	96	4	20	...	2	...	1	...	123
Class 14.—Drugs, Chemicals and By-Products.									
Chemicals and Blue	51	77	...	2	...	...	...	1	131
Paints and Varnishes	43	5	...	...	...	...	...	...	48
Class 16.—Timepieces, Jewellery and Plated Ware.									
Jewellery	28	4	2	...	...	...	...	...	34

Appendix X—*continued.*

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Class 17.—Light, Heat, and Power.									
Electric light, &c.	27	1	...	...	...	...	1	...	29
Class 18.—Leatherware, excepting Harness and Saddlery.									
Leather bags, &c.	125	64	...	...	...	...	...	...	189
Class 19.—Minor Wares not elsewhere included.									
Brooms	18	24	1	...	...	...	...	...	43
Cooperage	...	...	1	...	...	...	...	...	1
Laundries	3	46	..	3	...	...	...	1	53
Plumbers and tinsmiths ...	129	7	...	...	...	...	2	...	138
Rubber goods	35	38	...	...	...	...	...	...	73
Toys	9	1	...	...	...	...	...	...	10
Miscellaneous	69	67	1	...	...	...	...	...	137
Total	3,111	3,777	231	272	24	...	91	57	7,563

Appendix XI.

Accidents by Machinery, 1919–22.

Machines.	1919.	1920.	1921.	1922.
Metal Working Machines—				
Drills	10	15	21	12
Emery wheels	27	23	33	39
Guillotines	3	3	5	4
Lathes	19	28	24	21
Milling	3	4	3	3
Polishing	5	5	7	4
Power presses	26	35	31	38
Rivetting	...	3	2	2
Rolling	4	5	6	6
Screwing	1	2	1	2
Shaping	...	3	4	3
Shears	9	5	4	7
Slotting	5	2	1	2
Steam hammers	2	6	10	3
Wire-working	24	37	29	47
Other tinsmiths' machines	8	6	3	4
Other ironworking machines	12	10	14	18
	158	192	198	215
Woodworking Machines—				
Band saws	15	12	7	5
Boring	...	4	8	5
Circular moulders ...	19	25	18	20
Circular saws	82	92	82	95
Jointers	...	38	28	28
Lathes	...	7	4	1
Planers	36	19	12	10
Other woodworking machines	12	11	12	16
	164	208	171	180
Printing Machines—				
Cardboard box machines	16	12	8	...
Envelope machines ...	...	...	3	1
Guillotines	2	9	4	...
Platens	8	7	9	9
Printing machines ...	15	9	10	12
Wire-stitching machines	13	13	4	21
Other printing machines	2	8	8	13
	56	58	46	56
Food and Drink Machines—				
Biscuit machines	...	4	6	4
Confectionery machines ...	6	6	6	5
Crown corking machines	..	...	5	2
Dough brakes	2	8	1	1
Mincing	1	6	3	9
Mixing	1	2	3	2
Tobacco	3	2	4	7
Other food and drink machines	10	11	1	7
	23	39	29	37

Machines.	1919.	1920.	1921.	1922.
Stone, clay, &c., Machines—				
Brick presses	2	3	5	2
Pans	...	2	..	...
Tile presses	9	2	2	1
Other stone, &c., machines	1	1	...	3
	12	8	7	6
Leather Working Machines—				
Power presses	*10	14	13	11
Rolling		...	3	2
Shaving		3	...	1
Other leather machines ...		3	1	7
	10	20	17	21
Clothing Machines—				
Band knives	...	3	...	...
Boot machines	7	18	7	6
Fur-cutting	2	4	...	...
Ropemaking	5	2	6	4
Sewing	7	9	10	9
Wool machines	12	12	12	10
Other clothing machines	3	7	2	6
	36	55	37	35
Laundry Machines—				
Calenders	4	3	4	6
Folding	...	1	...	...
Hydro-extractors ...	1	...	...	2
Ironing	4	5	1	4
	9	9	5	12
Rubber Working Machines—				
Power presses	*7	2	1	...
Rolling		2	...	2
Other rubber machines ..		4	2	1
	7	8	8	3
Brushmaking machines ...	...	...	1	1
Paintmaking machines ...	...	...	1	2
Soapmaking machines ...	...	6	2	1
Miscellaneous Machines—				
Elevators and cranes ...	15	11	26	24
Engines	10	6	9	5
Fan	...	1	1	...
Mill gearing	61	36	48	66
Other machines	23	...	...	13
	109	54	84	112
Total	584	657	601	677

* Unclassified.

Appendix XII.

Prosecutions by Districts, 1918–22.

Year.	Informations Laid.	Convictions.	Dismissals.	Withdrawals.
		Metropolitan.		
1918	42	35	2	5
1919	47	46	....	1
1920	89	85	. .....	4
1921	67	62	4	1
1922	46	46	.....	.....
		Newcastle.		
1918	7	6	.... .	1
1919	13	13	.....	.....
1920	25	23	.....	2
1921	11	10	1	.. ..
1922	6	6	.....	.....
		Rest of State.		
1918	.....	.....	.....	.....
1919	13	13	.. ..	.....
1920	5	5	.....	.. ..
1921	3	3	.....	....
1922	8	8	.. ..	.....
		The State.		
1918	49	41	2	6
1919	73	72	..... .	1
1920	119	113	.....	6
1921	81	75	5	1
1922	60	60	.....	.....

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NEW SOUTH WALES.

DEPARTMENT OF LABOUR AND INDUSTRY.

REPORT

ON THE WORKING OF THE

FACTORIES AND SHOPS ACT 1912

DURING THE YEAR 1923.

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THE TWENTY-SEVENTH SERIES OF ANNUAL REPORTS BY INSPECTORS APPOINTED UNDER THE FACTORIES AND SHOPS ACT, 1912, FURNISHED TO THE MINISTER FOR LABOUR AND INDUSTRY IN TERMS OF SECTION 19 OF THAT ACT.

The Under Secretary, Department of Labour and Industry, to The Honorable the Minister for Labour and Industry.

Department of Labour and Industry,
15th July, 1924.

Sir,

I have the honour to forward for submission to Parliament, in terms of section 19 of the Factories and Shops Act, 1912, Annual Reports on the operations of that Act by each of the Inspectors appointed thereunder, for the year ending the 31st December, 1923.

I have, &c.,
F. W. KITCHING,
Under Secretary.

OFFICE OF THE CHIEF INSPECTOR OF FACTORIES AND INVESTIGATION OFFICER*

Operations.

Report in terms of Section 19 of the Factories and Shops Act, 1912.

Arrangement of Inspectorial Districts.

The provisions of the Factories and Shops Act were extended to cover the whole of the State, as from the 1st July, 1915. The area outside of the Metropolitan District is divided up into Country Districts, and the following statement will show the arrangement of these districts at the close of 1923 :—

District.	Head Centre.	Staff.
Newcastle	Newcastle	Inspector Armstrong.
		,, Clark.
		,, Middlemiss.
North Coast	Lismore	,, Ogilvie.
North Western	Tamworth	Senior Inspector Burkitt.
South Coast	Wollongong	Inspector Waugh.
South-Western	Goulburn	,, Wallace.
Southern	Wagga	,, Durack.
Western	Orange	,, Baker.
Broken Hill	Broken Hill	,, Dunleavy.

The Country District Officers, in addition to the work of factory inspection and investigations under the Industrial Arbitration Act, are required to carry out work under the Early Closing Acts as well as that pertaining to the Departmental policy of Country Labour Exchanges.

Interchanges of Inspectors between Metropolitan and Country Districts were made during the year.

Mr. Senior-Inspector Huntley was transferred from the Newcastle District to the Metropolitan District, and Mr. Inspector Armstrong went to Newcastle in his stead. Mr. Inspector Ogilvie assumed duty in the North Coast District, *vice* Mr. Inspector McEvoy, transferred to the Metropolis.

Mr. Superintending-Inspector Armitage, early in the year, entered upon six months extended leave in addition to accumulated recreation leave, his duties being filled by Mr. Senior-Inspector Huntley.

Mr. Inspector Aldington, who was stationed at Broken Hill, was transferred from this Branch to the Scaffolding and Lifts Branch of the Department on March 22nd, 1923, and his position at Broken Hill was filled by Mr. Inspector Dunleavy.

Messrs. W. A. Darbon, J. J. Dunwoodie, and J. A. Hastie were appointed, on probation, to the Inspectorate as from 26th March, 1923, their appointments being confirmed on 16th November, 1923. These new officers were, during the year, attached in their work to experienced inspectors for instruction and training.

I regret to have to report the death, on 13th July, 1923, of Mr. Inspector Pickering. He was a valuable officer, being a highly skilled mechanical engineer, and was popular with his fellow officers and the members of the general public with whom he came in contact in the discharge of his official duties. He was the elected General-Division Representative in this Department on the Salaries Committee under the 1922 Amendment of the Public Service Act.

Statistics.

Cards of instruction served on the occupiers of factories within the Metropolitan District numbered 12,611 for 1923, as compared with 17,674 in 1922, the decrease being mainly due to the depletion of staff

* Matters covered by the Boiler Inspection Regulations made under Section 62 of the Factories and Shops Act, 1912, are reported upon by the Departmental Engineer and Chief Inspector of Scaffolding and Lifts.

as explained above; in the Newcastle District, 3,212 in 1923, as against 2,841 in 1922; in the Broken Hill District, 625 in 1923, compared with 172 in 1922; in the rest of the State 5,981, as against 5,400 in the previous year.

Returns collected from factory occupiers for 1923 show that at the date of collecting the returns (24th November, 1923) 11,058 factories throughout the State employed 131,561 persons, compared with 10,674 factories employing 123,077 persons at the end of 1922, an increase of 384 factories and 8,484 persons. Male employment increased by 8,991, there being an increase of 1,359 under 21 years of age, and 7,632 over that age. Female employment decreased by 507, there being a decrease of 610 over 21 years of age and an increase of 103 under that age. Of the total persons employed, 95,926, or 72·9 per cent., were male, and 35,635, or 27·1 per cent., were female.

The following statement will show the increase or decrease in the number of factories and persons, males and females, employed therein, from the year 1915, when the whole of the State was brought under the provisions of the Act, to 1923 inclusive:—

Year.	Factories registered.	Increase over previous year.	Persons employed.		Total.	Increase over previous year.		Total.	Percentage of total increase.	
			Males.	Females.		Males.	Females.		Males.	Females.
1915	7,425	1,432	70,517	28,706	99,223	7,181	1,901	9,082	79·1	20·9
1916	8,065	640	63,895	28,757	92,652	*6,622	51	*6,571	*100·8	0·8
1917	8,099	34	66,066	29,185	95,251	2,171	428	2,599	83·6	16·4
1918	8,346	247	74,719	31,246	105,965	8,653	2,061	10,714	80·8	19·2
1919	9,003	657	84,474	32,431	116,905	9,755	1,185	10,940	89·2	10·8
1920	9,745	742	92,566	33,479	126,045	8,092	1,048	9,140	88·6	11·4
1921	10,087	342	88,819	33,565	122,384	*3,747	86	*3,661	102·3	2·3
1922	10,674	587	86,935	36,142	123,077	*1,884	2,577	693	*271·9	371·9
1923	11,058	384	95,926	35,635	131,561	8,991	*507	8,484	*105·9	5·9

*Decrease.

The number of effective registrations of factories as at the 31st December, 1923, was 11,076, as compared with 10,746 at the close of the preceding year.

The following statement shows the numerical alteration in factory registrations at 31st December, 1922 and 1923:—

District.	Registrations effective at 31st December, 1922.	1923.		Increase.	Registrations effective at 31st December, 1923.
		Registrations.	Cancellations.		
Metropolitan	6,431	1,389	1,240	+149	6,580
Newcastle	1,109	234	193	+ 41	1,150
Broken Hill	140	43	30	+ 13	153
Rest of State	3,066	705	578	+127	3,193
Total	10,746	2,371	2,041	+330	*11,076

* Adjusted figures.

The figures in this table are compiled as at 31st December, and therefore differ from the figures in the text following, which are compiled as at 25th November, the date on which the annual returns were collected.

Detailed figures as to the number and classes of factories, number and sex of employees, and horse-power of machinery used in the various districts of the State will be found in the Appendices I to XII.

On the 24th November, 1923, there were 6,573 registered factories in the Metropolitan District, employing 103,356 persons, an increase of 206 factories and 2,666 persons, compared with the figures at the end of the previous year. Of this increase, males represented an increase of 3,134, or 117·5 per cent., while there was a decrease of 468 females, or 17·5 per cent., 2,485, or 93·2 per cent., and 664, or 24·8 per cent., being respectively an increase of males and a decrease of females over the age of 21 years. Of the total persons employed, males represented 70,022, and females 33,334, or 67·7 and 32·3 per cent. respectively. Only 6,776, or 6·5 per cent., were under 16 years of age; 11,510, or 11·1 per cent., were between 16 and 18 years; 15,158, or 14·6 per cent., were between 18 and 21 years; and the remainder, 69,912, or 67·8 per cent., were over 21 years of age.

Of the total males employed, 2,825, or 4·3 per cent., were under 16 years of age; 5,585, or 8·0 per cent., between 16 and 18 years; 7,513, or 10·7 per cent., between the ages of 18 and 21 years; and the remainder, 54,099, or 77 per cent., were over 21 years of age.

Of the total females employed, 3,951, or 11·9 per cent., were under 16 years of age; 5,925, or 17·7 per cent., between 16 and 18 years; 7,645 or 23 per cent., between the ages of 18 and 21 years; and the remainder, 15,813, or 47·4 per cent., were over 21 years of age.

It is satisfactory to report that out of a total employment in the Metropolitan District of 103,356 only 6,776, or 6·5 per cent., were under 16 years of age. A comparison of the figures of each sex under and over 21 years of age is somewhat interesting, inasmuch as it demonstrates that, whereas the difference between the number of females of these ages is slight, the excess of males over 21 years of age is large. There were more females than males under 21 years of age employed in the factories in the Metropolitan District, but the males over 21 years of age exceeded the number of females over that age in the proportion of more than 3 to 1.

During

During the period of 1912 to 1914 the percentages of boys and girls under 16 years of age remained about the same, but for the period 1914 to 1923 the percentage slightly increased, as the following table will show :—

Percentage distribution of persons under 16 years of age.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1912	2·3	2·9	5·2	1918	2·4	3·3	5·7
1913	2·2	2·8	5·1	1919	2·6	3·4	6·0
1914	2·3	2·9	5·2	1920	2·5	3·4	5·9
1915	2·8	3·1	5·9	1921	2·6	3·6	6·2
1916	2·6	3·3	5·9	1922	2·6	3·8	6·4
1917	2·5	3·4	5·9	1923	2·7	3·8	6·5

Taking the males and females under 16 years of age collectively, there was a slight decrease during 1913 over the previous year, but from 1914 to 1923 the percentage gradually increased, equalling in 1915, 1916, and 1917 that for 1920, as the table indicates. The percentage for 1918 was slightly below that for the three previous years, being 5·7 as against 5·9, but for 1923 it was higher than for any year since 1909, when it was 6·8. The tendency seems to be for females to increase steadily, whilst males fluctuate.

The industry class employing the greatest number of persons in 1923 was clothing and textile fabrics, with 27,393, followed by metal works, machinery, &c., with 16,611, and food and drink, &c., with 13,857, these three classes accounting for 57,861 out of a total of 103,356 employed in all classes of factories in the Metropolitan District.

Clothing and textile fabrics showed a decrease of 1,192, and metal works, &c., increased by 1,927, and food and drink decreased by 580 as compared with 1922. The decreases in employment were in treating raw materials (144), oils and fats (100), food and drink (580), clothing and textile fabrics (1,192), drugs, chemicals, &c. (78), timepieces, jewellery, &c. (104), leatherware (194), and minor wares (43).

The following statement will show the increase or decrease in persons, males and females, from 1915, when the Act was first extended to the whole State, to 1923 inclusive :—

Year.	Persons employed.			Increase over previous year.			Percentage of total increase.	
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
1915	54,891	26,438	81,329	.....	.....	.....	.....	.....
1916	47,378	26,649	74,027	*7,513	211	*7,302	102·9	2·9
1917	48,927	27,223	76,150	1,549	574	2,123	72·9	27·1
1918	55,355	29,145	84,500	6,428	1,922	8,350	77·0	23·0
1919	62,030	30,309	92,339	6,675	1,164	7,839	85·2	14·8
1920	68,583	31,270	99,853	6,553	961	7,514	87·2	12·8
1921	63,850	31,309	95,159	*4,733	39	*4,694	*100·8	·8
1922	66,888	33 802	100,690	3,038	2,493	5,531	55·0	45·0
1923	70,022	33,334	103,356	3,134	*468	2,666	117·5	*17·5

* Decrease.

The following table shows the increase or decrease in number of factories and persons employed therein during the same period :—

Year.	Number of factories.	Increase over previous year.	Persons employed.	Increase over previous year.
1915	4,758	.....	81,329	.....
1916	4,814	56	74,027	*7,302
1917	4,799	*15	76,150	2,123
1918	4,942	143	84,500	8,350
1919	5,330	388	92,339	7,839
1920	5,842	512	99,853	7,514
1921	5,934	92	95,159	*4,694
1922	6,367	433	100,690	5,531
1923	6,573	206	103,356	2,666

* Decrease.

Total increase—1,815 factories, 22,027 persons.

As at 24th November, 1923. 1,171 registered factories in the Newcastle District employed 12,569 persons, of whom 11,349, or 90·2 per cent., were males, and 1,220, or 9·8 per cent., were females. 63·2 per cent. of the females employed in the Newcastle District and 16·9 per cent. of the males were under 21 years of age. The large percentage of adult male employment was due to a great extent to the number employed at the steel and iron works of the Broken Hill Proprietary Company, Limited, at Port Waratah, Rylands Bros. (Aust.) Limited, The Commonwealth Steel Products, Limited, and other large works, aggregating 5,727, or 60·7 per cent. of the total number of males over 21 years of age. These figures are considerably above those for the previous year owing chiefly to the Broken Hill Proprietary Company's Steel Works, and Ryland Bros. (Aust.) Limited Wire Works, which had been partially closed down during that year, being now in full operation.

In

In the remainder of the State, there were on 24th November, 1923, on the records of the Department, 3,314 registered factories, employing 15,636 persons, of whom 14,555, or 93·1 per cent., were males, and 1,081, or 6·9 per cent., females. This was an increase of 107 factories and a decrease of 1,820 persons, as compared with 1922.

Horse-power of Machinery.

At the end of the year 1923, 8,269 factories throughout the State were using machinery equal to 264,113 horse-power.

Steam power, representing 145,201 horse-power, was used in 1,209 factories; gas power (16,916 horse-power) in 991 factories; electricity and other (101,996 horse-power) in 6,069 factories.

Child Labour in Factories.

Two hundred and twenty-six children under 14 years of age (152 boys and 74 girls) were granted the special permission of the Minister to engage in factory employment. Seven thousand three hundred and three children were certified as physically fit for employment in certain classes of factories, and in no case did the examining Medical Officer decline to certify.

Following is a table showing the distribution of the foregoing permits and certificates in the districts in which the State is divided for Departmental purposes :—

District.	Permits granted.			Certificates of Fitness.	
	Special (to children between 13 and 14 years of age).			Issued.	Declined.
	Males.	Females.	Total.		
Metropolitan	151	73	224	6,687	.....
Newcastle	1	1	2	450	.....
Broken Hill	...	.....	...	27	.....
Rest of State	...	.....	...	139	.....
Total	152	74	226	7,303	.....

By way of comparison, the numbers of special permits granted during the last ten years are shown hereunder, and the allocation of the children who were granted certificates into the various industries is shown in Appendix X.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1914	152	8	160	1919	200	37	237
1915	143	6	149	1920	142	38	180
1916	162	14	176	1921	125	44	169
1917	115	28	143	1922	116	61	177
1918	134	31	165	1923	152	74	226

New Industries.

Several new industries were founded during the year, of greater or less dimensions. At Port Kembla the manufacture of telephone wire was commenced as a result of contracts with the Commonwealth Government. A large plant comprising paper lapping, spinning, and lead covering machines, ovens, &c., was put down, and employment given to a large number of males and females. Copper wire is received from the "drawing" plant and is "lapped" and finally sheathed with lead or other material according to contract requirements. Two shifts were worked during the year, girls being employed at the paper lapping machines on day shift and males over 16 years on the afternoon shift. Previously all telephone wire was imported, but there seems every prospect that all requirements can now be manufactured within the State.

A cotton ginnery was established at Port Waratah, the plant being of the four-unit type, but as available material for treatment was small, did not operate extensively. The process of ginning is simple. Cotton, as grown, is fed against the hooked teeth of revolving discs, and as the teeth catch the fibre it is drawn through apertures which are too small to allow the passage of the cotton seeds, which are deflected elsewhere. The fibre is then blown by air blast into an automatic conveyor, from whence it is passed to an hydraulic press. After being pressed into bales it can be shipped or stored as required.

Jute carpets, runners, and mats are now being manufactured locally, and although only a small number of persons are employed in the industry, it has good prospects of expansion.

A large hosiery company, finding that a certain kind of cotton was well suited for the purpose, began the manufacture, therewith, of towelling, sheeting, cotton-drills, and calicoes. The cotton used is Australian grown, and is claimed to be of good quality. Employment was given to about fifty hands, mostly females, and as the plant is to be increased, there seems every prospect of this new industry absorbing a large number of employees.

The manufacture of pressed steel split-pulleys was entered upon, as was also the production of steel shelvings and steel office fittings.

At Gosford a plant was put down for the manufacture of colloidal oil. Formerly an essential was extracted from orange rind and used by certain chemical firms, the pulp being classed as waste. This latter is now treated, and concentrated fruit syrups are produced therefrom, finding a ready sale.

Scientific

Scientific blown glass used for chemical experiments, surgical, and commercial analytical work, was formerly all imported, mostly from Germany. This class of work is termed "lamp blown," is very delicate and highly skilled, and is quite distinct from "furnace blown." Apart from the making of new articles, broken parts can also be repaired.

Manufacture was commenced of a new anti-corrosive for general commercial use. By means of a specially invented spray almost any surface can be covered with a coating of any molten metal. Apart from metal surfaces, such substances as wood, stone, brick, cement, glass, &c., can be metalised for protective, decorative, and other purposes. It is claimed that in other countries the process has proved its usefulness, and that it has been effectively used for large bridge work and marine work.

Overtime in Factories.

During 1923 the Minister granted applications for extensions of overtime in respect of 18 factories, affecting 5 male and 268 female employees. Similar permission was granted during the previous year in respect of 29 factories, involving 296 female employees, and the figures for 1921 were 10 factories, and 241 females.

The following table sets out the classes of factory in which the additional overtime was worked :—

Class of Factory.	Factories.	Employees.		Total.
		Male.	Female.	
Class V—Metal Working.				
Canister making	1	...	16	16
Class VI—Food and Drink.				
Confectionery	3	...	48	48
Tobacco	1	5	78	83
	4	5	126	131
Class VII—Clothing and Textiles.				
Millinery	1	...	5	5
Tailoring	1	...	54	54
	2	...	59	59
Class VIII—Books, Paper, Printing, &c.				
Printing	10	...	65	65
Class XIV—Drugs, Chemicals.				
Drug packing	1	...	2	2
Total	18	5	268	273

Fencing and Guarding of Machinery.

During the year assiduous attention was paid to rendering the working of factory plants as safe as possible. Existing and suggested safeguards were carefully analysed by the Departmental Machinery Committee and research made into the standards of guarding in vogue in other countries. As a result it can be claimed that the factory conditions in this State, generally, and from the machinery point of view particularly, will bear favourable comparison with those obtaining elsewhere.

With the expansion in industry and the numbers employed, the risk of injury is correspondingly increased and the experience of factory inspectors proves that the constant attention of all concerned must be continuously drawn to the element of danger. In a few of our largest factories special efforts in "safety first" are made, but the principle requires to be generally adopted to reach its full value to the community.

A conspicuous advance has been made with the guarding of power-presses, and it is now possible to guard almost every operation performed by these dangerous tools. In small repetition work the "magazine" and sliding feeds are being availed of with success. The various automatic locking guards now in use, if maintained as designed and affixed, provide perfect safety to the operatives. The rotary table feed principle, an eminently safe method, is coming more into favour.

Laundry machinery received special attention, and the cover guarding of hydro-extractors has noticeably progressed. The Departmental requirement that such safety devices shall effect the dual purposes of (1) ensuring that the cover shall be in a position (closed) over the basket opening before power can be applied, and (2) ensuring that the cover cannot be raised (opened) until the power is cut off, and the basket either has ceased to revolve or is moving, by kinetic energy, at not more than ten revolutions per minute, provided that the standard of safety is otherwise maintained, has previously necessitated the provision at the cover of separate "power" and "safety" locks.

Late developments have disclosed that the Departmental requirement can be satisfied with a combined power and safety action of low cost and complete utility. Shirt, collar, and cuff ironing machines were experimented with during the year, and it is possible that an efficient guard for these machines will soon be marketed.

A higher standard has been reached in the guarding of transmissions, and the use of piping, pressed and sheet metal, and wire-woven guards has become more pronounced.

Blue prints of certain guards are made by the Department and are, with descriptions, provided free of cost to occupiers interested.

Accidents in Factories.

During the year, Inspectors furnished reports upon 902 accidents in factories coming within the provisions of section 38, 11 of which proved fatal, and 111 resulted in permanent injury to workmen.

Following

Following is an analysis of the reported accidents, and the extent of injuries :—

Extent of Injury.	Accidents Reported.				
	District.				Total.
	Metro-politan.	Newcastle.	Broken Hill.	Rest of State.	
Fatal	5	1	...	5	11
Permanent Injury--					
Loss of arms	2	1	...	...	3
,, hands	6	1	...	1	8
,, fingers or parts	95	18	1	14	128
,, leg	...	...	...	1	1
,, eye	1	...	...	...	1
Temporary Injury—	104	20	1	16	141
Gas poisoning	...	7	...	1	8
Burns, scalds, &c.	85	32	...	6	123
Cuts, lacerations, bruises—					
On hands	336	61	...	18	415
,, arms	32	12	...	3	47
,, body	19	29	...	6	54
,, feet	8	8	...	...	16
,, head	40	38	...	5	83
Other	3	...	...	1	4
	523	187	...	40	750
Total	632	208	1	61	902

The following statement gives the distribution of accidents as due to machinery or other causes, Appendix XI contains details of machinery at which accidents happened.

Causes of Accident.

Machinery—				*Miscellaneous—*	
Metal working	314	Paper, printing	61	Mill gearing	57
Woodworking	164	Leather	18	Engines	5
Stone, clay, &c.	10	Rubber	3	Elevators, conveyors, &c.	30
Food and drink	42	Other	16	Fan	1
Clothing, &c.	35				

Other Causes.

Dangerous substances—		Electricity	4
Steam	12	Chemicals	10
Hot substances—		Gas	11
Water	9	Other	9
Metal	69		
Other	22	Total	902

The accidents which resulted fatally are briefly described as follows :—

The manager of a motor cycle works, after inserting some wire spokes in a wheel, commenced to grind down the protruding ends of the spokes. The emery wheel burst and portion of it struck the employee, fracturing his skull, with fatal results. It subsequently appeared that the original emery stone had been replaced by a larger and wider stone, not suited to the high speed required.

A workman was standing on a wooden box guard erected around a fan attached to a dynamo; the box moved and the man was brought in contact with the whirling fan. He was severely cut about the legs; gangrene set in and he died four days later.

An employee at a large steelworks, falling into a large pot of molten slag, received severe burns, which caused his death. The man had been ill, but the evidence before the coroner at the subsequent inquest was insufficient to enable the Court to determine whether the fall was accidental or not.

At a large meat works several employees were moving the carcase of a bullock by means of a friction winch, to which was attached a wire rope. The rope smashed the porcelain covering of an electric switch and, in contact, became heavily charged with electricity. The employee operating the winch was killed instantly and several other employees received severe shocks.

At a freezing establishment an employee fell into a hole of boiling water and steam, caused by a fracture in a "blow-down" pipe underground. It seems that whilst he was attempting to shut off the "cock," the side of the hole gave way, precipitating him into it up to his neck. He died in hospital the same evening.

At an acetylene gas factory an employee, evidently finding there was an extensive escape of gas from one of the cylinders, procured a spanner and tried to tighten the union to prevent the escape of gas. It is assumed that the spanner slipped and on probably coming into contact with the ironite floor created a spark, which ignited the gas. In the closed atmosphere a violent explosion occurred and the man was killed.

An adult sawyer at a joinery works was struck in the neck by a piece of timber, 1-inch square and about 14 inches long, which was thrown with great velocity from a revolving saw. The man bled to death within a few minutes.

A man employed in an engineering works was at work in a slipway, lighted by a large "cargo cluster" from a cable stretched along the bank of the slipway. In climbing up the bank he grasped the cable with both hands to lift it over his head and, in doing so, received a shock of such power that he was killed. The insulation was evidently faulty, and the management accepted a suggestion made by a Departmental inspector that a different type of cable should be used for the purpose of lighting the slipway.

An employee at a bush sawmill, whilst lifting a face cut from a circular saw, overbalanced and fell upon the revolving saw. Both his arms and one side of his face were cut off and he died some hours later. The accident is attributed to the fact that the boards at the side of the saw had been cleaned of sawdust and were slippery, and also that the deceased was wearing new boots at the time.

A lad of 14 years met with fatal injuries through being caught in overhead shafting at a suburban paint factory. He was standing on an iron cross-rail to close a valve, when portion of his clothing caught in a coupling and he was whirled round several times, sustaining a fractured skull and other injuries, which terminated fatally.

Means of Escape in case of Fire.

There was a large increase in new buildings and much remodelling of existing premises, the alterations and additions in cases embracing several new storeys. The fire risk was correspondingly increased and much vigilance was necessary. Where the remodelling or extensions occurred in factory premises already certified as having satisfactory alternative means of escape, a complete review had to be made, and a fresh certificate from the Chief Officer of Fire Brigades obtained. Many complications arose from the discovery of rooms let, frequently on long lease, on the top floor of lofty buildings otherwise occupied as office premises. These difficulties were satisfactorily overcome, and it is safe to claim that the fire-escape requirements of the Factories Act have, in the above manner, drawn the special attention of many building institutions to the need for consulting the Department before letting premises for factory occupation. In many of the above cases the owners of the buildings, in the interests of safety, have had satisfactory fire escapes provided.

The use of gas lights, heaters, fire extinguishers and fire buckets has been carefully supervised, and the regulations strictly applied. The proper maintenance of existing escapes has been insisted upon, and when plans of new buildings have been submitted to the Department the utmost care has been exercised to ensure compliance with the law.

The co-operation of the Chief Officer of Fire Brigades was constantly given, and during the year he certified seventy factories as being provided with satisfactory alternative means of escape.

Prosecutions.

During the year informations for breaches of the Factories and Shops Act and Regulations were laid in seventy cases.

Following are the details :—

		Convictions.	Dismissals.	Withdrawals.	Total.
Section.					
20	Failing to keep premises in a cleanly state	1	.....	.....	1
33	Failing to fence dangerous machinery	15	1	.....	16
38	Failing to report accidents	1	.....	.....	1
41	Employing boys under 16 on prohibited machines	2	.....	.....	2
43	Breaches of overtime provisions	9	.....	.....	9
45	Employing children under 16 without certificates	2	.....	.....	2
49	Working or permitting work in furniture factories after hours	29	.....	.....	29
68	Failing to pay tea-money	1	.....	.....	1
Regulation.					
1 of 10-3-16	Failing to have boilers inspected	3	.....	.....	3
3	Insufficient air space	1	.....	.....	1
15	Failing to provide W.C. accommodation	2	.....	.....	2
16	Failing to provide wash-basins	2	.....	.....	2
21	Failing to provide doors to switchboards	1	.....	.....	1
	Total	69	1	.....	70

WALTER I. TAYLOR,
Chief Inspector of Factories and Investigation Officer.

BOILER REGULATIONS.

Report of Mr. P. A. Fildes, Departmental Engineer.

The subjoined table indicates Departmental action during the year in this regard :—

Number of certificates of approval granted 3
„ unsuccessful applicants 10
„ holders of certificates decreased by decease 2

The following is a summary of notices served upon factory occupiers, to ensure compliance with the requirements of the Boiler Regulations :—

	Boilers.	Other Pressure Vessels.	Total.
Pressure reduced	100	30	130
Pressure increased	47	24	71
Safety valves (spring loaded)	25	7	32
Locked safety valves	52	3	55
Pressure gauges	10	2	12
Gauge-glass protectors	96	7	103
Test cocks	26	.....	26
Cocks between check-valve and boiler	29	2	31
Valves on steam connections	5	2	7
Isolating valves	65	8	73
Blow-off cocks	3	.....	3
Fusible plugs	17	3	20
Unclassified	2	.....	2
Total	477	88	565

During the year, 510 boilers and 216 other pressure vessels were newly installed, and fifty-five boilers and twenty-six other pressure vessels were discarded. The number of the various types of boilers and other pressure vessels inspected is given in the following table:—

	Inspections.			Vessels.		
	First.	Re-inspections.	Total.	Discarded.	Newly Installed.	Explosions.
Boilers—						
Marine Wetback	.....	7	7	.....	.....	.....
,, Dryback	1	38	39	.....	1	.....
Multitubular	15	252	267	1	10	.....
Cornish	13	151	164	5	10	.....
Vertical	96	616	712	16	72	.....
Colonial	114	737	851	20	97	.....
Locomotive, including Portable, Traction, and Road Rollers	273	375	648	7	167	3
Watertube	62	381	443	3	125	1
Lancashire	8	98	106	2	8	.....
Cast-iron Sectional	10	18	28	1	10	.....
Jackass	7	31	38	.....	4	.....
Wolff	1	4	5	.....	6	.....
Egg-ended	.....	6	6	.....	.....	.....
Other Steam Generators	.....	17	17	.....	.....	.....
Total	600	2,731	3,331	55	510	4
Other Pressure Vessels—						
Jacketed Vessels	60	811	871	11	48	.....
Cylinders, Drying Drums, and Boilers (Steam Heated)	29	229	258	10	28	.....
Air and Water Receivers	64	331	395	2	52	.....
Digestors	17	93	110	3	21	.....
Hot Tables:—Presses, Drying Tables, Cantilever Presses, Patching Tables	15	169	184	.....	13	.....
Autoclave Presses	3	6	9	.....	3	.....
CO_2 Cylinders and Purifiers	12	101	113	.....	11	1
Vulcanizers	23	153	176	.....	21	.....
Calenders, including Mangles	7	97	104	.....	4	.....
Steam-heated Rolls	.....	5	5	.....	.....	.....
Desiccators	.....	7	7	.....	.....	.....
Retorts	1	56	57	.....	.....	.....
Vegetable Steamers	.....	14	14	.....	.....	.....
Copper Coils and Pipe Heaters	7	73	80	.....	5	.....
Monteju and Crystallizers	.....	19	19	.....	.....	.....
Vacuum Vessels	1	12	13	.....	1	.....
Economisers	.....	9	9	.....	.....	.....
Steam Separators	.....	.....	.....	.....	.....	.....
Stills	7	9	16	.....	6	.....
Sugar Driers	.....	5	5	.....	.....	.....
Sterilizers	.....	2	2	.....	.....	.....
Oil Receivers	1	2	3	.....	.....	.....
Superheaters	1	.....	1	.....	1	.....
Stout and Wine Butts	.....	64	64	.....	.....	.....
Steam-heated Vessels	2	52	54	.....	2	.....
Coolers	.....	21	21	.....	.....	.....
Total	250	2,340	2,590	26	216	1

Boiler Regulations.

During the year the Minister granted three certificates of approval to inspect boilers, &c. One hundred and eighty-seven certificates were in force at 31st December, 1923. One hundred and twenty-three inspectors are located in Sydney and suburbs, fifteen in the Newcastle district, and forty nine in country centres.

Seven thousand three hundred and fifty-three reports, in connection with the inspection of steam boilers and other pressure vessels, were lodged by accredited inspectors as follows:—

	Reports received.		
	Boilers.	Other Pressure Vessels.	Total.
Prescribed Reports:—			
First Inspection with specification cards	600	250	850
Reinspection	2,731	2,340	5,071
Total	3,331	2,590	5,921
Non-prescribed Reports:—			
Internal	703	192	895
External	139	398	537
Total	842	590	1,432
Grand Total	4,173	3,180	7,353

The urgent need of efficient and expert inspection, followed by the application of competent remedies to defects found, was further made apparent by the explosion of another steam boiler located in the country. This unfortunate occurrence resulted in the death of two persons and severe scalding to a third. The boiler, which was not subject to inspection under the boiler regulations, was of the locomotive type, and larger than those of that kind usually met with; it was imported from a reputable firm of manufacturers. The owners of the boiler, upon request, had made available to them the services of a Departmental inspector to report upon the occurrence. After a few years of successful operation a growing weakness in the boiler manifested itself by pronounced bulging, near the crown sheet, of the firebox side plates, due, it was found, to the breaking of a number of water-space stays. Faulty stays were renewed from time to time, but the continued breaking of the stays evidently outpaced their replacement, and the boiler exploded. The firebox plate bulged badly, tearing itself away from the remaining stays, dragging down the crown sheet, displacing flue tubes and forming a large opening, from which the contents of the boiler were discharged. Later inspection disclosed that the whole staying system of the firebox was defective, and doubtless needed entire replacement about the time evidence of weakness was disclosed.

A boiler forming part of a portable engine for chaff-cutting purposes on a farm in a country district exploded, and projected itself into a haystack. The force of the explosion resulted in one person being thrown a distance of 34 yards and receiving injuries to which he succumbed. Two other persons suffered severe scalds and abrasions. The boiler was of the locomotive type, and subsequent inspection disclosed that the explosion was directly attributable to extensive grooving of the firebox crown plate along the flange above the fire-door. The plate failed from weakness which was the natural consequence of the crown girders being too short for the purpose of providing adequate support for the firebox crown plate, and was an initial structural defect. At the coronial inquiry the evidence was that the boiler had been inspected some six months before the explosion, and a working pressure of 100 pounds certified for it by an accredited inspector. The dangerously grooved condition of the crown plate at the time of inspection was overlooked by the accredited inspector, and the boiler, six months later, exploded under a pressure of 50 pounds. The finding of the coroner was to the effect that the explosion was due to a faulty boiler, which was negligently inspected by the inspector, who was committed for trial on a charge of manslaughter, but was subsequently acquitted. The boiler in question was imported from a well-known firm of manufacturers, whose products are generally recognised as being amongst the best of the kind. The development of a defect which finally led to the boiler's destruction is evidence of the urgent necessity for thorough inspection of all boilers by persons qualified in every respect, and directly responsible to the State in giving effect to specific duties cast upon them.

What would doubtless have been a disastrous explosion was narrowly averted by the timely and unusual disclosure of serious grooving existing in the longitudinal lap joints of two steam drums forming parts of a water tube steam boiler installed in a factory. A slight leak issuing apparently from the solid plate at the joint of one drum was noticed by one of the attendants. The boiler was blown down and a hole drilled at the centre of the perforation, and a plug screwed in. Some days later while under steam a further leak was discovered on each side of the recently fitted plug. Upon close inspection by a Departmental inspector, indication of internal grooving along the seam was visible on the outside of the drum for a distance of 8inches, distributed on each side of the plug. This discovery lead to a thorough intern l inspection, when evidence of grooving extending some 3 feet along the seam, just covered by the landing, was disclosed. The boiler was at once put out of service and repairs effected. These consisted of cutting away parallel to the groove that part of the plate forming the lap of the joint, and converting the whole length of lap joint into a double butt joint, thus eliminating the inherent tendency of a lap joint to again cause grooving. Following this repair the boiler was again put into commission, when some days later the second drum was seen to have developed similar grooving to that in the other drum; this was repaired in like manner. The boiler is now operating successfully, and no further trouble is anticipated in those parts made good by the repair.

A steam boiler of the vertical type, having a conical fire-box containing four "Galloway" cross tubes, was inspected and certified by an accredited inspector for a working pressure of 100 pounds per square inch. This pressure was disputed by the Department primarily on the grounds that the firebox, taking into account its length, its mean diameter, and thickness, was deficient in strength for the certified pressure when computed by the application of appropriate rules and formulæ. The Departmental Engineer's ruling was challenged principally upon the accredited inspector's contention that the cross tubes in the firebox should be considered as effectively staying the section in which they were fitted, and that some allowance should also be assigned to these tubes as affording stiffening to the firebox shell. When asked to quote authorities supporting his contention, the inspector failed to do so, and in attempt to support his claim communicated with a well-known English authority on boiler work, eventually receiving a reply which confirmed the Department's attitude. In its then condition the Department refused to accept any pressure in excess of 40 pounds per square inch as safe. To permit of a working pressure of 85 pounds per square inch being used on the boiler it was found necessary to fit two rings of screwed stays connecting the firebox to the shell, thus constituting points of substantial support and virtually shortening the length of the firebox, and in addition support had to be given to the shell crown by means of four stays connecting the shell crown to the furnace crown. These alterations were effected, and the boiler is now giving satisfactory service with a pressure, suitable to the factory occupier, of 85 pounds per square inch, but there is no doubt that grave possibility of disaster by explosion attended the use of this boiler before it was strengthened to meet Departmental requirements.

A steam-heated copper jacketed pan, installed in a factory and used for boiling sugar syrup, exploded, resulting in two employees receiving severe scalds. An inspection of the appliance by a Departmental inspector disclosed that the inner copper pan at the bottom had badly bulged upward, tearing itself away from the tube connection which served as the draw off for the pan contents; the steam was discharged through the opening torn in the pan, scattering the syrup in all directions. It was also ascertained that no steam trap had previously been connected to automatically drain off the condensation from between the

pan and jacket. A hand-operated wheel valve fitted to an open discharge pipe had been provided for draining purposes. Evidently just previous to the explosion the attendant had omitted to properly drain off the water, and there is reason to believe that the pan consequently exploded from the effects of water-hammer. The Departmental inspector recommended that the occupier fit automatic steam traps to the pan in question, on its re-installation after repair, and to all other steam pans and similar vessels in the factory. This has been done with satisfactory results. Further representations caused the pressure gauges of the pans, which were working at a pressure lower than that of the boiler steam supply, to be moved into positions where the steam pressure contents of each pan was more readily discernible.

Three imported copper stills were certified for a working pressure of 120 pounds per square inch. On the data made available to the Department being investigated, the factory occupiers, a city chemical company, were advised that on the application of appropriate formulæ it was found that the vessels were considerably overstressed at that pressure. The company's engineer and accredited inspector were invited to confer with the Departmental officials, as the matter was one of the greatest importance to them. The check calculations resulted in two of the vessels being reduced to 44 and the third to 41 pounds pressure per square inch. The safety valves were thereupon set to relieve at the lower pressures.

Mr. Superintending Inspector Armitage reports :—

Having had only three months on official duties during the year 1923, owing to my having taken extended and recreation leave in April, 1923, for nearly ten months, my report must be limited.

In the district over which I had direct supervision, I had to make serious complaints in connection with the construction of new factories by the method known as reinforced concrete. Stability and appearance are all that can be desired, but in the majority of cases but little provision is made for permanent ventilation, the main means provided being through the windows, which, in my opinion, is very unsatisfactory. All windows and openings are closed when work is completed on Friday evening or Saturday morning and the air movement or air charging of the room is completely blocked.

It would not alter the stability or the appearance of the buildings if a tube (with as low a diameter as 3 inches) were built in the walls during construction and permanent ventilation by ventilators 18 inches from the floor and 9 to 10 feet high were provided. It is easily and practically demonstrated that pure air which we have in this beautiful country is the best thing that man can have.

Sanitary conditions in new factories are not strictly complied with by architects, and I have had occasion to draw attention to this serious mistake.

More attention is now being paid generally to the fencing and guarding of machinery. It is now recognised that hydro extractor baskets must be guarded and that wood-working machinery must be amply safeguarded, and that circular saws must be hooded and fitted with a riving knife at the back. The chief difficulty is usually with the man with a small capital starting an industry, to whom every pound expended means an added interest bill.

While on leave, I visited England and the Continent, and took the opportunity of viewing a large number of factories for the purpose of informing myself as to methods adopted where the lawful requirements were similar to those of our own Act, and obtained much valuable information as regards the method and manner of fencing and safeguarding machinery, as well as other matters affecting general factory conditions.

Mr. Senior Inspector Huntley reports :—

Early in the year I resumed duty at Head Office after four additional years in charge of the Newcastle Branch Office. A city and suburban area was allotted to my oversight, and in addition I performed special duties for the Chief Inspector. Upon Mr. Superintending Inspector Armitage taking ten months' vacation I assumed his duties, and also sat upon the Departmental Clerical Division Salaries Committee, being the representative for the Clerical Division of this Department. These special duties occupied a good deal of time, and gave me reduced opportunity for outside work. Additional duties cast upon me included the training of inspectors, newly appointed, in both inside and outside work, and altogether, with a depleted staff of trained inspectors, the year was full of work.

Registrations.—There were numerous registrations, including the customary changes in occupancy. The new buildings erected are of modern type, and embrace the latest developments in architectural skill. Opportunity was seized, whether in the registration of new premises or re-registration of old premises, to require a satisfactory standard of compliance with the Act and Regulations.

Structural Conditions.—With the sustained improvement in building designs, and architects vieing with each other to introduce the latest methods, much assistance is afforded towards maintaining a high standard. When premises are being re-modelled or added to, consultation with the architects is very helpful, and saves difficulty and inconvenience later.

Hygiene.—The important matter of natural ventilation received special attention, and it would seem necessary to render workrooms more comfortable during the summer months that ample inlet and outlet ventilation should be insisted upon. Opinions vary as to the most satisfactory height above floor level at which air should be introduced to a workroom, but a standard will no doubt soon be reached. All are agreed that there must be a good air movement to leave human efficiency unimpaired, and towards this end the increased use of the anemometer and Kata-thermometer is proving of material assistance. It is considered that a temperature of 75 deg. Fahrenheit (dry bulb) is in every sense comfortable, provided the air movement is satisfactory. In large buildings the spaces remotest from the windows and ventilation require the most attention, and electric fans, easy of installation, supply the ordinary deficiencies. In certain industries mechanical ventilation is necessary, and the most efficient are those which provide for cooling or heating the air, prior to induction, according to season. The importance of keeping industrial workers supplied with an adequate quantity of fresh air cannot be overestimated.

Additional

Additional attention is called for with respect to lighting. The standard now required is light equal to that given out by an ordinary stearine or paraffin candle of 6 to the pound at a distance of 12 inches from the flame. For fine work this is, in my opinion, inadequate and for ordinary work unsatisfactory. The new instrument for measuring the amount of illumination in foot candles, and called the foot candle meter, is extremely handy and easy to read. Its adoption in this State would be an advantage.

Lavatory and seating accommodation, copious supply of good drinking water, and provision of satisfactory dressing rooms engaged a good deal of attention, and no opportunity was lost to ensure healthy and comfortable conditions for the operatives, who are yet, unfortunately, backward in their co-operation.

Several air tests were made during the year, and, where necessary, unsatisfactory conditions were rectified. Fearing the danger of lead-poisoning in the manufacture of certain gas-meters, I co-operated with the Department of Public Health, and medical examination of the employees was made. As a result, increased washing facilities were provided and advice given to the workers how to protect themselves from possible infection. The Department referred to has had prepared for issue in the interests of those working in lead a handy poster, in cloth, containing hints on the prevention of lead-poisoning.

At a silica brick works I caused preventive measures to be established to reduce the danger of inhalation, and at explosives factories careful application was made of the chlorate of potash regulations.

Fencing and Guarding of Machinery.—As usual very close attention was given to machinery, and where the guards installed were not efficient, the occupier and operatives were informed of the deficiency and approved guards substituted. I found no difficulty in getting the interest of employers, who, generally speaking, are very ready to comply with the law. Woodworking machinery, especially, requires that the guards and fences must be constantly maintained, and I was able to considerably improve the standard of such safeguards. Hydros and laundry machinery, generally, also received special attention. Power-presses, always dangerous elements, can now be guarded to allow of safe working in any operation, and our standard in this regard is very satisfactory.

It is safe to say that our standards of safeguards is maintaining a progressive movement and that every effort is being made to insist that industry shall be made as safe as possible. For example, I found at a large smelting works an overhead electric cable only 7 feet 6 inches from ground level charged with 240 volts, and used to transport electric motor trucks. After consultation the management agreed to increase the height of the cable and correspondingly decrease the risk of accident. In another large works the control points of certain machines, driven by electric motors, were found in places not easily accessible and at some distance from the machines. Under my directions the control in each case was affixed close to the machine.

Accidents.—Considering the large machinery plants operating in my district and the army of workmen engaged thereat the number of accidents during the year was small, though two had fatal results. A piece of timber, 1 inch square and about 12 feet long, was broken and caught on the back of a circular saw and driven like a spear through the neck of the sawyer, causing almost instant death. The saw was stated to have been guarded at the time of the accident and to have had the further protection of a riving knife at its back. In the second case a party of men were working at night at a slipway, which was lighted by an electric "cluster," the armoured cable trailing along the bank of the dock. One of the men in climbing the bank caught hold of the cable to lift it over his head, receiving an electric shock, which proved fatal. Upon examining the cable soon after the accident, I found that through a break in the armouring and insulation the current had been diverted along the armouring, rendering it "alive" and highly dangerous I recommended the use of "cab tyre flex" instead of armoured cable, which in certain positions is likely to become damaged, when it also becomes unsafe. In my opinion, all wandering electric lights require careful inspection, and should be subject to regular tests.

Fire Escapes.—The services of the Fire Escape Officer of the Metropolitan Brigade were utilised frequently during the year, and some difficult problems were overcome. Where the building was new and the plans could be seen, much trouble was obviated. Where premises had been taken for factory purposes without reference to the Department many difficult positions arose, occasioning much oversight and consuming much time. In some cases where the building was already provided with a certificated alternative means of escape, structural alterations had been carried out without notice, rendering the escape nugatory. Close attention was given to ensure free access to fire escapes during working hours.

The number of external escapes is increasing, and the oversight of their maintenance will call for a lot of attention in the future.

Overtime and Certificates of Fitness.—The requirements of the law in respect to overtime and certificates of fitness were well observed during the year.

Welfare Work.—All factory inspectors should interest themselves in all "safety first" efforts and movements for promoting welfare work among factory workers. Following this principle I have endeavoured to educate workers, by counsel and illustration, to the dangers of their work and the adoption of hygienic processes and habits. Employers have also been encouraged in their own interests and the interests of their employees to develop schemes for increasing the comfort, health and efficiency of the workers.

Interest in welfare work is extending, and many employers have told me that there is a "dollar" side to it.

Mr. Inspector Davis reports :—

Registrations.—During the year under review registrations in this district have been confined chiefly to transfers through change of occupiers. There were several new registrations.

Structural Alterations.—It was found necessary to issue instructions for certain alterations, which were of a minor character, and applied mainly to lavatory and W.C. accommodation. Conditions generally pointed to the fact that occupiers had made themselves conversant with the requirements of the Act in this direction.

Sanitation.—Sanitary conditions, on the whole, were fairly satisfactory. A few occupiers were instructed to comply with Regulation 15 (*h*), viz., to be hot-limewashed every three months or kept cleanly painted with enamel paint.

Fencing of Machinery.—To see that sections 33 and 34 of the Act and the Regulations are observed it is necessary to exercise much vigilance on account of the growth of industrial activities and mechanical methods of production. Certain classes of work will not always permit of the guards affixed to some machines being used. The guard must at times be temporarily removed and, unless the person removing the guard replaces it when he has finished the job, it is almost certain that the next person to operate the machine will neglect to do so, which careless act on the part of both of the operators renders the machine dangerous to most, if not all, of the employees in the factory. Some employee might slip when passing the machine, and, endeavouring to save himself from falling, possibly meet with a serious accident through coming into contact with the unfenced part of the machine. This is one of several reasons for the constant attention regarding the efficient fencing of all dangerous parts of machinery. Vigilance is also necessary in connection with mill gearing. On one occasion I visited a factory and found that guards had been removed from some overhead belts for the purpose of repairs. When the repairs were completed, the engineer thoughtlessly started the plant without replacing the guards. (I might mention that the plant was started shortly before I entered the factory.) Upon directing the engineer's attention to the danger, he immediately stopped the plant and replaced the guards. The standard of guarding is steadily improving, as strong gauge wire mesh guards are replacing the wooden guards so frequently used. In some instances. motors are bring directly connected to engines, thereby considerably reducing the quantity of belting in the work of the factory, and also reducing the danger.

Boilers.—Careful attention was given to ascertain whether Regulation 6 (Regulations published in *Government Gazette* No. 46, of 10th March, 1916) has been complied with. In a few cases it was necessary to instruct the occupier to exhibit the certificate which had been furnished, but which had been thoughtlessly locked away in a desk.

Accidents.—A large number of accidents were reported, many of which did not come under the provisions of section 38 of the Act. Other reported accidents were not of a serious nature. A boy of 14 years of age was attending to a wire-winding machine when he was by some means entangled in the wire. His apron, consisting of a doubled coke-sack, secured to his waist by a strong gauge wire, was caught on the drum of the machine and he was carried round on the drum, which was revolving at the rate of 80 revolutions to the minute, resulting in his arm being broken in two places, and a fractured skull, besides a severe laceration of the forehead. He was exceedingly fortunate in not being killed outright.

Fire Escapes.—Several means of escape in case of fire were recommended by the Chief Officer of Fire Brigades, and, upon the recommendations being furnished to the occupiers, the orders were satisfactorily carried out, and certificates of registration recommended. Instructions were also served on some occupiers to keep the escapes and exits free from obstructions, thereby giving immediate means of escape to all of the persons working in the factory.

Overtime.—In no instance was application made for overtime to be worked in respect to boys under 16 years of age.

Certificates of Fitness.—In this direction a misunderstanding sometimes exists, the idea being that if a boy does not work a machine, he does not require a certificate. For this reason it was necessary to issue instructions to some occupiers to obtain certificates of fitness for all persons under 16 years of age.

Bakehouses.—Most occupiers complied with the requirements of the Act, and it was only necessary in a few instances to issue instructions for lime-washing or painting of the bakehouses. On account of the limewashing having a tendency to scale and fall off, many occupiers of bakehouses are considering the advisability of using paint in place of the limewash.

Mr. Inspector Henstock reports :—

Registrations.—The registrations and cancellations during the year were mainly confined to changes of occupiers, which included the re-construction of several new factories.

Structural Conditions.—Structural conditions have shown much improvement, mainly owing to re-building within the city area. Congested conditions and limited floor space for machinery has made it necessary for several occupiers either to rebuild or make suitable additions. Architects have in each instance readily consulted me on matters pertaining to the Act, and much improved conditions have been the result.

Sanitation.—Sanitary conditions show improvement in city factories as a result of re-building and structural alterations, but in the outside suburban areas the want of a sewerage system is still an urgent matter, as the pan system gives little hope for any material change.

Fencing Machinery.—The usual care was given to this important work. The installing of new machines has given opportunities to make improvements in matters of guarding. The use of electricity as a driving power has been the means of getting a direct drive to the machines by the installing of a number of smaller motors, which is the best means for safeguard against accident, as it eliminates much of the danger from belting and pulleys.

Accidents.—Several accidents in connection with machinery were reported during the year and were carefully investigated. An unfortunate accident occurred to a youth, which ended fatally. He was assisting another workman and, whilst climbing upon some cross piping to close a valve leading from an overhead tank, his clothing caught on a projecting set screw attached to a collar on a revolving shafting, and he received very severe injuries, to which he succumbed later in the day. A fatal accident also occurred in connection with a meat-preserving works. A butcher was attending a wire rope ice connection with the slaughter-house. The wire rope came into contact with an electric switch, which was uncovered at the time, and he received severe electric shock, which terminated fatally.

Bakehouses.—Several new bakehouses were constructed in the suburbs, being confined chiefly to making of pastry. Limewashing and sanitary conditions generally were well observed.

Fire Escapes.—A number of fire escapes have been passed by the Chief Office of Fire Brigades, and general upkeep maintained. Close attention has been given to occupiers keeping passage way clear and to ensure precautions to prevent fire.

Boiler Regulations.—Occupiers generally have complied with the necessary conditions, but occasionally attention had to be drawn to the period of renewal of certificate, but it is satisfactory to note that instructions given at time of examination are carried into effect and generally well maintained.

Mr. Inspector Jackson reports :—

Registrations.—A large number of new registrations was effected in this district during the year under review. One large factory in the tin box and tin printing line of business removed from the city area to the Leichhardt district, amalgamating with a firm in the same industry.

Structural Conditions.—There were but few additions to factory premises, but some occupiers found it necessary through increase in their businesses to remove to larger premises.

Sanitation.—Generally speaking the factories in this district were kept in a cleanly state, but occasionaly I had to issue instructions for their thorough cleaning. As most of the sanitary conveniences are connected with the sewerage system, I have had very little trouble in this regard. The ventilation in most of the factories has been fully sufficient to meet all requirements. Where necessary, action was taken to ensure compliance with the Act and Regulations.

Fencing of Machinery.—In many cases I ordered improved guarding to machines and mill gearing. I still find that there is a tendency to remove and not replace emery wheel guards.

Fire Escapes.—This matter has received attention where necessary, but the majority of factories in this district are in one and two storey buildings, to which the fire escape provisions of the Act do not apply.

Bakehouses.—I have generally found that this class of factory is in a satisfactory condition, limewashing and cleanliness of the bakehouses being well observed.

Accidents.—The number of accidents reported was not above the average, and most of them were of a minor nature.

Certificates of Fitness.—Employers have been particularly careful to observe the provisions of the Act in this respect, and I have not found it necessary to remind them of their obligations in this matter.

Mr. Inspector Lynch reports :—

Registrations.—The year just ended shows a remarkable increase in registrations. New factories registered include a large factory for the manufacture of cotton cloth, two large motor-body factories and one for wool weaving, as well as a large number of smaller undertakings.

Structural Alterations.—A number of factories have been remodelled during the year to conform with the requirements of the Act. In one large factory recently erected I found it necessary to order the removal of pan-system closets which were erected within the factory.

Fencing of Machinery.—Modern methods of fencing are becoming more popular with factory occupiers, and in most new factories wooden fencing has given way to the more permanent and effective metal fencing.

Fire Escapes.—In all new factories erected strict attention has been given to the provisions of the Act in regard to fire escapes, and in a number of old factories the escapes have been improved.

Accidents.—No fatal accident occurred in my district during the year, but one very serious accident occurred in a tile press, causing the loss of a right arm.

Bakehouses.—The bakehouses in my district have given little trouble, and a high standard of cleanliness has been maintained.

Certificates of Fitness.—The law in regard to certificates of fitness for persons under 16 has been well observed by factory occupiers; only in few instances were any failures noted.

Overtime.—No cases of illegal overtime were noticed.

General.—The standard of factories generally is on the up-grade, and much is being done voluntarily by occupiers to improve hygienic and other conditions.

Mr. Inspector H. McEvoy (North Coast and Metropolitan Districts) reports :—

During the first quarter of the year I was stationed in the North Coast district, and then transferred to the Metropolitan area, and allotted a district comprising part of the city of Sydney and also suburbs on Illawarra lines from Banksia to Helensburgh and from Sydenham to Bankstown.

Registrations.—There were 160 registrations, but a considerable number comprised re-registrations of premises previously occupied as factories. The class of factories registered included motor engineering, cabinet works, sawmills, boot machine, repairing shops, clothing, pottery works, bakeries, smallgoods, &c.

Structural Conditions.—I found it necessary to have structural alterations carried out in a few factories in order to provide better ventilation to workrooms, and also the providing of lavatory and W.C. accommodation for employees.

Sanitation.—Where sewerage system prevails the conditions generally were fairly satisfactory, but where the pan system operates stricter supervision was essential. Unfortunately, there are employees who apparently pay little respect to cleanliness, and who impose unpleasant conditions upon their fellow workers. Unless employees as a whole assist employers in maintaining good sanitary conditions, trouble in this matter will constantly occur.

Fencing of Machinery.—The standard of guarding is on the up-grade. Constant supervision, however, is neeessary to compel some oeeupiers to comply with this all-important part of the Aet. There are also types of employees who either wilfully or negligently fail to use the guards provided. In a number of instances I served on oeeupiers instructions to provide and maintain guards to dangerous parts of machinery.

Boiler Certificates.—In a few cases I found breaches of the boiler regulations, and furnished reports thereon.

Accidents.—The number of accidents reported was comparatively few, and were chiefly of a minor character. Investigations disclosed that in nearly every instance the aceidents were due to negligence or risk taken by employees. The most serious aecident I investigated oeeurred at a joinery works. An adult, of twenty years' experience in the sawmilling industry, was adjusting gauge on saw-bench whilst circular saw was in motion; his hand slipped off gauge and came into contact with saw, resulting in loss of his hand.

Fire Escapes.—This section of the Act has received careful attention. In a few cases certificates of registration have been withheld pending the carrying out by owner of instruction of Fire Brigades officer in respect to provision of alternative means of escape.

Certificates of Fitness.—In a few instances attention of occupiers had to be directed to this section of the Act.

Bakehouses.—In two eases the granting of certificates of registration were withheld pending carrying out of specified structural alterations. The majority of bakehouses are kept in a clean and good condition.

General.—If intending faetory occupiers would consult the Department before taking possession of premises they would ofttimes save themselves much inconvenience and worry. Necessary structural alterations—the providing of suffieient lavatory and W.C. accommodation and fire-escape provisions—would be more expeditiously carried out if occupiers refused to take possession of premises until owner complied with all the requirements of the Act and Regulations.

Mr. Inspector Young reports :—

Registrations.—There was a large number of new registrations during the year, mainly changes in ownership. Several new and up-to-date factories were erected in the Camperdown area.

Structural Alterations.—I had no occasion to direct structural alterations. Several firms voluntarily enlarged their premises, mainly in the motor-car industry.

Sanitation and Ventilation.—Generally speaking sanitary conditions were good, the whole of my district being sewered. Ventilation was also good, it only being necessary to ask for alteration and improvement in a few cases. In such cases I took the neeessary action.

Fencing Machinery.—As reported by me on previous occasions, I found difficulty in having guards maintained. Employers were quite willing to instal new guards and improve existing guards where necessary. In many cases employees remove guards, preferring to work their machines without them. It was necessary to serve many orders in an endeavour to proeure the proper maintenance of guards. Often where a guard is left off, or its proper adjustment interfered with, another employee going to work the machine will not reattach guard, probably feeling that the foreman or occupier would object to the waste of time. This is in my opinion is a wrong view, as I believe in most cases employers and foremen prefer that their employees should give the neeessary time to make these adjustments, as it is the desire on the part of most employers to avoid aecidents, which, in addition to eausing injury to the employee, causes a diminished output and consequent loss.

Fire Escapes.—Several new eseapes were erected and approved by the Chief Offieer of Fire Brigades during the year. Considerable delay was caused in three cases by having to wait for the sanction of owners of adjoining premises, to procure roof to roof escapes, which are generally the most satisfactory, the adjoining premises not being factories.

Accidents.—Many of the accidents were of a minor character, but, unfortunately, some were serious. At a tin-stamping factory a guard provided for the power press had been mislaid, and a youth, age 17, started the job without it. Shortly after commencing one of the tins jambed on the die, and in trying to remove this with his hand he aecidently touched the foot pedal, causing the ram to come down, taking four of his fingers off. On a tenoning machine the operator did not clamp his work down, and the cutters striking the timber, it was drawn into the machine, together with the operator's hand, at a part which could not be guarded. Four fingers were amputated. Contributing eauses to accidents are earelessness, fatigue, and illness; machines installed in parts whieh are badly lighted; lack of deeent arrangements for the comfort of the employees; earelessness of the occupier as to the littering of parts, and beneches with waste materials; also lack of interest on the part of employees to their own personal safety, and unless workers can in some way be induced to interest themselves in safety first, the installation of guards and safety devices will be to a great extent nullified.

Bakehouses.—In practically all cases it is necessary to remind the occupier of the necessity to limewash the bakehouse at regular intervals, and in some cases to watch for the accumulation of old tins and boxes under troughs and tables and order their removal.

Certificates.—I found it necessary in a few instances to direct employers to procure certificates of fitness, mainly in places where young people had not previously been employed.

General.—In practically all places boiler certificates were exhibited. I found a considerable amount of unemployment in the engineering trades.

Miss

Miss Senior Inspector Golding reports :—

Registrations.—A large number of new registrations were made, including many transfers. A number of the buildings were new and up-to-date, with good air space and light; sanitary conditions all that could be desired. The trend of the times seems to be to build as far as possible from the city, where there are open spaces, fresh air and light, so different from many congested areas in the city.

Sanitation.—This matter still gives trouble in the old factory buildings in the city. I found in one factory male and female employees all using the same W.C.'s and wash basins, all in a dirty condition, not a bolt or lock on one door. The Department soon had these conditions altered. In another factory, where there were fifty-five females employed, only three W.C.'s were provided, one of which had been out of order for a considerable time. Action was taken. A fine of 40s. with costs was the result. A very bad feature in this case was that the water supply had been turned half off. Various other cases came under my notice, one where five women were employed (including the employer) no W.C. had been provided by the landlord, but he had given them permission to use the one five of the male employees used; the same applied to the wash-basin. As a result of Departmental action a W.C. and wash-basin for these women were provided by the landlord.

Structural Alterations.—Many structural alterations were made in connection with old factories, which brought them nearer the required standard.

Overtime.—Most excessive overtime was worked by females in a factory, the industry in which was not covered by an award. Over sixty times in the year had been worked. The overtime ranged from 3½ to 9 hours, and not once had tea-money been paid. When the girls were not working back at the factory, work was given to them to do in their own homes, thus breaches of section 46 were committed. These girls were only paid the flat rate for this work; if done in the factory it would be paid for at time and a half. Some of them had worked overtime six times in succession. The Department prosecuted in several cases, and fines of 40s. and costs were imposed. The employers after my inspection paid all the tea-money due, and 50 per cent. on the home work, which amounted to a large sum. In another factory a female employee had worked overtime three and four times per week, never less than four hours, and was never once paid time and a half. This overtime, as in the above case, had never been notified to the Department. Action was also taken here, and heavy fines imposed. After the prosecution, £15 10s. back money was paid to this girl. In a city printing factory almost the same conditions obtained *re* overtime, with the difference that overtime rates and tea-money had been paid. The conditions were so bad that the Department prosecuted. I found more breaches *re* overtime than for many previous years.

Certificates of Fitness.—This year I found more children than formerly employed in factories without certificates; in some instances glaring evasion of the law was shown. In these cases the Department prosecuted. A number of applications were made for permission for girls under 14 years to work in factories. In three cases I found most appalling poverty, so that it was imperative to recommend permission be granted, as the children were to be paid 15s. and 17s. per week, which sums would at least provide bread for them; the families mostly were large, six and eight children, all under 16 years, fathers out of work or only paid the basic wage. I brought some of the serious cases under the attention of the Chief Secretary's Office, and blankets were provided.

General.—Work on the whole has been fairly good. There was a slackness for a time in shirt factories, also first-class tailoring work-rooms and in various others. It was very slack in the small knitting factories. The larger knitting factories in my district were kept very busy, and although not covered by an award, the employees earned a good rate of wage.

Welfare Work.—This is still progressing. Most large employers have provided rooms to meet in, &c., matrons, and lady doctors to attend certain days for the benefit of their employees.

Miss Senior Inspector Harriott, B.A., reports :—

Registrations.—In the district under my supervision five new buildings were registered as factories. Several dressmaking workrooms were added to the register, but the majority of registrations effected was due to change of ownership.

Structural Conditions.—A suburban laundry was found in a dilapidated and insanitary condition. The premises were quite unfit for the business carried on in them; owing to the structural alterations required by the Department, the building was vacated. In a factory where chlorate of potash is prepared for use as an explosive, orders were served on two occupiers to provide adequate dressing room and lavatory accommodation for the use of the employees. Two young girls were engaged filling small bags with the powder. No overalls were provided and their persons were covered with the highly inflammable dust. This industry is considered so dangerous on account of the risks arising from fire, that special regulations under the Factories Act are required to be observed in all factories where chlorate of potash is stored or used in connection with the manufacture of explosives. In England many workers have met with serious accidents outside the factory premises through leaving their work with the powder on their persons and coming in contact with fire. Four fatal accidents have also occurred in this city through the same cause. Hence the importance of the provision of suitable dressing-rooms and ample facilities for washing in factories of this class. Overalls and caps were provided for the girls. A woollen material was chosen for these as being less inflammable than cotton or silk, which burn fiercely when impregnated with the powder.

Sanitation.—Numerous orders were served on occupiers in regard to general sanitary conditions. The printing department in a photographic factory was found to be overcrowded. Thirty-two girls were employed in a room with cubic space for nineteen only. On account of the nature of the work direct light had to be excluded and mechanical means of ventilations resorted to. The air in the room was most oppressing, the smell of chemical used in the manufacturing process increasing the discomfort of the workers. The lavatory accommodation provided for the use of female employees did not meet the requirements of the Act. Three sanitary conveniences were provided for the use of 116 employees. Action was taken and an order of the Court made requiring matters to be remedied. The firm has since moved the factory to other premises.

Overtime.—The general depression in trade was reflected in the small amount of overtime worked during the year. The only factories notifying overtime to any extent were those connected with printing trades and the manufacture of motor-cars. The latter industry was particularly busy. Four extensions of the overtime allowed under the Act were granted to printing firms. The overtime in these cases was in connection with the publication of periodicals, which involves a certain amount of rush-work.

Certificates of Fitness.—The number of applications for Ministerial permission to allow girls under 14 years of age to work in factories is, unfortunately, not decreasing. Eleven of these cases were investigated by me during the year.

General.—The Minister's permission was sought by a firm employed in the manufacture of telephone cables to employ some fifty females on a night-shift—hours from 4 p.m. to midnight. In company with Mr. Superintending Inspector Huntley and Mr. Inspector Waugh, I made inquiries into this application at the factory, which is situated outside the metropolitan area. The firm had designed the plant with a view to working a night-shift, which was said to be necessary for the fulfilment of an important contract. The women's work consists of watching machines winding paper round wire and repairing breakages of paper where necessary, and the company's argument was that the work is light and that women and girls are more deft at it than boys. It was claimed also that youth labour was not available in the district. The proposal being contrary to the Labour Covenant of the Treaty of Versailles, permission was refused, and the company has since found it possible to employ youths on the nightwork.

Miss Inspector Brown reports :—

During the year I was able to complete inspections of almost all the factories in the city and suburban areas allotted to me, also at Katoomba, Leura, and Blackheath. In addition, I acted as relieving manageress of Women's Labour Exchange for nearly a month.

Registrations.—Attended to a large number of registrations, principally re-registrations of premises previously occupied, advantage being taken in so doing to have necessary renovations and alterations to bring them to nearer the standard required by the Act. Several new factories were also included showing modern improvements—notably a large printing factory, with excellent lighting and up-to-date ventilation and sanitary requirements, the structure being practically fireproof. Other new factories were built on similar lines to above, covering the following industries, viz. :—Chemicals, motor building, ice-cream manufacturing, boots and shoes, confectionery, and clothing manufacturing, the planning of same evidencing due regard for the health and comfortable working conditions of the employees concerned. The class of building, even of the smaller type, is far in advance of that which was considered " good enough " in past years.

Structural Conditions.—Although the above improved conditions are apparent, there still remains with us the class of building not constructed for factory use, in which some additions or alterations are required from time to time to keep them up to the requisite standard, and usually orders served are carried out readily.

Sanitation.— Constant attention is necessary to maintain a satisfactory standard of cleanliness and good order. In some factories it is evident that pride is taken in the maintenance of good conditions, but there is a small minority that I believe would carry on under unsanitary conditions, even if inspected daily. In a city confectionery factory I found the wash-basins provided for female employees not reserved for lavatory purposes, being filled with trade utensils, paste brushes, &c., showing dual use. Action was taken and a substantial fine imposed. In a suburban leather-bag factory, the wash-basins provided for females were out of order, and admittedly so for three months, the girls being compelled to use the men's wash-basin, situated at the entrance to the men's W.C. accommodation. Proceedings in this case resulted in a substantial fine and costs. In connection with the same factory action was taken for dirty and neglected condition of the whole premises. Lime-washing needed attention in some instances. In Katoomba, Leura, and Blackheath areas I found fairly satisfactory conditions generally; a few orders *re* cleaning and lime-washing were promptly complied with.

Overtime.—Less overtime than usual was worked during the year. I dealt with three applications for extensions of overtime in printing works—evidently justified—which were granted by the Minister. There seems to be a constant shortage of employees in this industry. I found excessive overtime worked in a city confectionery factory—also a suburban one—in each case prescribed hours were flagrantly exceeded, no payment of tea-money made, and incorrect overtime rates paid. Required notice of working had not been sent to Department, no record kept—the information being gained by closely questioning employees. Proceedings were taken in each instance, and substantial penalties were imposed.

Certificates of Fitness.—This section of the Act is now more generally observed. In some, where breaches were detected, warning letters were sent. Investigation for certificates under Section 40, employment of children under 14 years of age in a factory, were fairly numerous, and in some cases the family earnings were so small, or the periods of unemployment of the father had been so lengthy, that, much against my inclination, I had to recommend the granting of certificates, but some cases investigated, showing less stress of circumstances, were withdrawn.

Laundries.—Fair conditions were maintained in laundries in my areas; in some instances orders *re* limewashing were necessary and duly complied with.

General. Employment in many industries has been very spasmodic during the year, owing to trade conditions, but towards the latter part several brightened up. Occupiers complained of lack of orders, blaming inter-State competition. Many firms are now seriously regarding welfare work, and in many factories excellent provision is made for the comfort and well-being of employees.

Miss Inspector Scobie, O.B.E., reports :—

Registrations.—In two of the suburban areas under my supervision during 1923 three modern buildings were erected and registered as factory premises. Much thought and consideration had been exercised

exercised in the construction and general lay-out of these buildings—adding materially to the comfort and well-being of the many hundreds of women workers employed therein. Indeed, the buildings far exceed the requirements of the Act. As in former years, change of occupier accounted for the bulk of registrations.

Structural Alterations.—Structural alterations of an extensive character were carried out in two instances within my city area. A picture theatre was transformed into motor works, employing a few women, and an old but substantial brick building was reconstructed to meet the ever-rising standard of working conditions.

Sanitation.—The standard in this regard was fairly well maintained. In every case where notice was served *re* cleaning or limewashing, I found the orders were executed with promptitude.

Overtime.—Three applications asking for extension of overtime were investigated by me, and permission to work subsequently granted.

Certificates of Fitness.—One outstanding instance of neglect in connection with this statutory obligation came under my notice. Out of a total of 400 women employed by one firm 40 were under 16 years of age; of this number, 37 girls were without certificates of fitness. The firm concerned was asked to show cause why it should not be prosecuted, and, in explanation, expressed regret for the oversight, and pointed out that the neglect was entirely due to the incompetence of the staff manager—who had been relieved of his position some time prior to my visit. This unusual incident establishes the necessity for constant supervision in this direction. Fourteen applications for permits for children under 14 years of age were investigated, and 12 granted. In one case refusal was recommended, and in the other I was instrumental in securing increased State aid, and in having the school exemption certificate cancelled.

General.—When inspecting a large cardboard-box and printing factory, I found the air in the top floor workroom very still and oppressive, and asked the firm to instal two electric fans; the manager readily acceded to my request. Again, in a city laundry I found it necessary to ask the proprietor to instal a fan above the collar-ironing machines—this was done. In one of the largest establishments in the city—with workrooms on the roof and in the basement—I asked that two thermometers be provided, in order that systematic readings might be taken of the temperature in certain workrooms. The thermometers were provided without hesitation, and a record of the readings is now being kept.

Miss Inspector Stuart-Robertson reports :—

During the year 1923 I was kept very busy. I had a large metropolitan district to supervise, and also completed a tour of Newcastle and district. In addition, I also attended to matters of urgency in the district of an inspector, who was absent through illness for about six months.

Registrations.—I dealt with a large number of registrations, the industries being mostly clothing and millinery.

Structural Conditions.—The remodelling of old buildings has been responsible for improved structural conditions. There have also been two fine buildings erected with all modern conveniences.

Sanitary.—Sanitary conditions are much improved. In the remodelling of old premises particular attention has been paid to sanitary requirements.

Overtime.—A good deal of overtime has been worked, and with few exceptions strictly in accordance with the provisions of the Act. Ten applications for extension of overtime were granted as inquiries disclosed that such extension was required to meet the exigencies of trade.

Certificate of Fitness.—This matter was well attended to by occupiers. Eleven applications for the Minister's special permission for girls under 14 years to work in factories were referred to me for investigation. In each case I found the family income inadequate for the supplying of the bare necessaries of life. The child concerned had previously been granted exemption from further att ndance at school by the Department of Education. When recommending to the Minister that the application be granted, I was of the opinion that the girls concerned were better off working in factories under good conditions, good wages, and in touch with the inspectors than to be compelled by circumstances to take any kind of employment offering in places unknown to the inspectors.

General.—Employment was well maintained in clothing and millinery factories, and skilled workers were much in demand. The knitting trade has been very slack. I have been informed that this was due to cheap garments from oversea being placed on the market.

Mr. Inspector Armstrong (Newcastle) reports:—

At the beginning of this year I was transferred from the Metropolitan District to take over the near North Coast District and that portion of Newcastle proper lately controlled by Mr. Senior Inspector Huntley.

Registrations.—Few new industries were registered during the year, although a number of existing premises changed hands and sawmills changed sites.

Sanitation.—Generally the sanitary conditions existing in the Newcastle portion of my district are satisfactory, but in the country portion occupiers of factories seem to be divided into two sections—those who care and those who do not, although it might be said in the latter's favour that an instruction is always willingly and expeditiously carried out. I refer more particularly to the cleansing of outhouses.

Structural Conditions.—It is very pleasing to report that many of the older factory premises in Newcastle are being demolished and larger and more modern premises erected in the suburbs. A co-operative society, which formerly carried on operations in a galvanized iron shed, has erected a fine three-storied brick building, where lavatory accommodation, ventilation and general comfort of the employees has received the consideration it merits.

Fencing

Fencing of Machinery.—With the exception of butchers, practically every employer has provided guards for all machinery and mill-gearing, although I found in many mills that the essential riving knife had "just been tied up to put a new saw in" or similar excuse. Similarly belt fencing in sawmill pits was frequently observed to be down. I anticipate that the caution administered will have the desired effect.

I have instructed every butcher in my district to provide and fix an efficient guard to mincing machine, which instruction, so far as I have seen, has been carried out.

Accidents.—Only four accidents reportable under Section 38 were brought under my notice during the year, which record speaks for itself. None of these accidents were of a very serious nature.

Fire Escapes.—The fire escapes in my district do not call for any special comment. Free access to same is always compelled.

Bakehouses.—The bakehouses generally are in a satisfactory condition, many occupiers limewashing their premises more often than required by the Act. I am instructing the occupiers in many cases to replace the wooden floors with concrete, and where such work has been carried out, both employer and employee have expressed their satisfaction.

Mr. Inspector Clark (Newcastle) reports :—

Registrations.—Amongst the new registrations of the year was that of the British and Australian Cotton Association Limited, of Waratah, which has erected a fine plant and a number of buildings for a cotton ginnery. This marks the establishment of a new industry in this State, and is the forerunner, it is confidently expected, of many others throughout this and the neighbouring States as the growth of cotton areas develop. Many other new factories have been added to the register, whilst changes of occupiership have necessitated new registrations in many instances.

Structural Conditions.—Improvement in this direction has again been noticeable during the year. New premises in many instances are replacing the old structures, replete with all the modern requirements as to light, ventilation and sanitation.

Fencing Machinery.—Strict attention has been paid to this important matter. Occupiers of factories generally are more ready to appreciate and co-operate in this phase of the work, but it is my experience that without constant visitation many get lax, and do not seem to feel any personal responsibility for the maintenance of preventive measures in the use of dangerous machinery. In some instances callous disregard of responsibility is shown, and proceedings have had to be taken to emphasise the necessity of conformity with the law. The standard of guarding is improving and the maintenance of fencing has generally been of a more satisfactory character.

Accidents.—The number of accidents in my subdivision of the district has fortunately been few, most of these being confined to lacerations, and in some cases to amputations of fingers or parts of fingers. The major portion of these occurred in the use of woodworking machinery, particularly spindle moulder and jointer machines, which are conceded to be, despite every necessary precaution, always fraught with danger to the operator. In a large steel works a serious injury was inflicted on a workman who was in charge of a gang forging a 60-ton steam hammer, by the handle of a cutter-bar being driven through his thigh. The bar was being withdrawn after a number of blows had been given when, through some misunderstanding in the signalling arrangements, the hammer descended and catching the bar in a sliding blow drove the handle of the bar through the man's thigh.

Fire Escapes.—No new fire escapes have been erected in my section of the district during the year, the existing ones have received the necessary attention.

Overtime.—Only a limited amount of overtime has been worked, mainly at the end of the year, when the clothing trades and aerated water trades are seasonally busy.

Certificates of Fitness.—This provision has been fairly well observed, the tendency now is not to accept juniors for employment in machine factories before the age prescribed.

Bakehouses.—Most of the bakehouses in the city and suburbs are fairly well kept, and in the country an improvement is being shown in the type of building in use for these purposes. Proper sanitary conditions are, however, difficult to secure in these places in the absence of any sewerage systems.

Boiler Regulations.—During the year several instances were found of boilers being in use for considerable periods without examination, as required by the regulations. These occurred mostly in bush sawmills in districts remote from towns and the railway, and therefore difficult of access and of information concerning them.

Mr. Inspector Middlemiss (Newcastle) reports :—

Registrations.—The conditions generally were normal, but the restarting of the largest works in the district, after being shut down for nearly a year, has the natural effect of stimulating trade in the local allied industries. Another large works (wire drawing), which obtains its raw material from the above-mentioned works, increased its staff to the largest number employed during the whole of its operations.

A new industry was commenced in a country district for the manufacture of essential oils from cull fruits. A large firm are carrying out extensive development work preparatory to the manufacture of cement on a large scale. A new country town electric lighting and power plant was put into operation under satisfactory conditions.

Structural Conditions.—The standard, generally, tends to improvement, though owing probably to financial stringency, and the general difficulties of the present industrial situation, few new factories have been erected in my district.

Sanitation.—The conditions in the city portion of my district are normal and generally satisfactory. Lack of co-operation, and acceptance of responsibility often adds to the difficulty an employer has in maintaining

maintaining the best hygienic conditions. In the country districts, where no sewerage system exists, the conditions are naturally less satisfactory, though the increasing use of septic tanks provides improved means of sewage disposal.

Guarding and Fencing of Machinery.—Although the conditions generally tend to improve, yet in many cases a far from satisfactory standard still obtains. In my experience less than 25 per cent. of the accidents met with are due to lack of localised guarding, and it appears to me very necessary to find a more efficient method of eliminating those due to other causes.

Within my experience, accidents may be broadly grouped as follows (in what I consider their order of importance) :—

(1) Those due to lack of experience—changing of operatives, &c.
(2) Those due to lack of co-ordination or understanding between fellow employees.
(3) Those due to what is usually termed "carelessness," or "lack of caution."
(4) Those due to localised guarding.
(5) Those due to unexpected causes, or conditions beyond the control of the injured person, such as explosions, &c.
(6) Those due to abnormal physical conditions of the injured person.

I am strongly of opinion that the most effective means to lessen factory accidents is through educational publicity methods, directed to both employer and employees with a view to placing the responsibility for the occurrence, and obviating its recurrence. I am of opinion that the issue of an instruction booklet would prove of incalculable benefit to the methods of welfare education referred in this and my previous reports.

Beyond the concrete suggestions made in previous reports, I have endeavoured to impress on factory occupiers the necessity of having some responsible person who shall be acquainted with the statutory obligations, and see that they are observed.

It appears to me certain that our most rapid improvements will be effected, through the goodwill, interest, and agency of both employers and employees.

Accidents.—Two fatal accidents occurred at a large works. In one case a man was fatally injured by being struck by the electro (lifting) magnet of a power-crane, driven by another operative. Similarly to those referred to in my last two annual reports, this accident resulted from a lack of effective co-ordination between the operatives. In the other case a man was fatally injured by precipitating himself into a mass of molten metal. He had previously complained of temporary illness due to the heat at the place of his occupation, and was understood to be resting, when he was seen to take the action mentioned. The man could not speak English.

This accident draws attention to :—

(1) The advisability of only employing persons able to quickly take any warning rendered necessary by a sudden and unexpected danger,
(2) and removal to a safe place of any person so physically affected by any accident, or work conditions, that an abnormal mental condition obtains.

The majority of the accidents reported were of a minor character, and did not result in permanent injuries, yet I am strongly of opinion that there are far more than should be, and that more consistent attempts to deal with the whole question by employers generally would effect a great reduction. A large number are due to actual lack of experience, this being clearly proved by the proportion of them occurring to new operatives.

Fire Escapes.—The few fire escapes in my district were found to be in satisfactory condition.

Bakehouses.—I found the bakehouses under my supervision to be generally satisfactory. Plans have been passed and the erection commenced of a large bakery, with a complete mechanical plant of the most modern type, housed in accord with the highest standards.

Overtime.—The provisions of the Act were complied with in a satisfactory manner. Little overtime was worked, excepting on account of holiday trade, but when it was, due notifications were forwarded.

Certificates of Fitness.—I have found that the large works carefully observe the requirements of the Act in such few cases where they employ labour of an age requiring certificates. No breaches came before my notice.

General.—As mentioned in my last report, the general commercial conditions in Newcastle at the beginning of the year were abnormally depressed owing to the fact that the largest iron and steel works in the district was closed down for production, and had been so for the greater part of the past year. The recommencement of operations of this firm towards the end of February marked the beginning of a brighter outlook and the confidence engendered had its beneficial result in stimulating and increasing activity in the local allied industries.

Mr. Inspector Ogilvie (North Coast) reports :—

Registrations. One hundred and ten new registrations were dealt with during the year, five new buildings were erected for factory purposes.

Structural Alterations.—Structural alterations and building additions were made at a number of factories.

Sanitation.—A large number of the factories in this district are supplied with a pan system. On many occasions I had to issue instructions for the outhouses to be kept in a more cleanly condition. Lids, with a box fitted for the storage of a fluid disinfectant, are now being fitted to seats of closets, and the disinfectant does its work when the lid is pulled down into position. In towns where the sewerage system is installed the conditions are fairly satisfactory.

Machinery.—Careful attention was given to the requirements of the Act in this direction. In a number of cases I found it necessary to instruct occupiers to guard dangerous parts. Instructions given were carried out forthwith.

Accidents

Accidents.—A number of accidents were investigated, all being of a minor nature with the exception of one. An employee who was assisting at a guillotine machine lost parts of three fingers through his hand coming in contact with the knife of the machine. The machine wheel is used for the cutting of veneer sheets, and has only recently been erected and was not provided with a guard. A suitable guard has now been devised for the machine, which will assist to prevent accidents of a similar nature.

Fire Escapes.—There is only one factory in this district covered by this section of the Act, and the provisions are being complied with.

Certificates of Fitness.—Notices were served upon several occupiers to procure certificates for employees under 16 years of age.

Mr. Senior Inspector Burkitt (Tamworth) reports :—

General.—There are now 549 factories in my district, as against 475 last year, showing an increase of 74. The fact that many of these are situated at long distances from centres of population—no less than 96 being forest sawmills—has hitherto made inspection a very difficult matter, on account of the impossibility of procuring suitable means of conveyance. For this reason there are still a few factories which have never been inspected.

Boiler Inspection.—I found that a number of boilers in use in the outlying factories had not been inspected as required by the regulations. In the cases of new registrations that had never been done, and in some others the inspections were overdue. This was largely due to the difficulty and expense of obtaining the services of a person authorised by the Minister to do the work. Apart from those employed by insurance companies there are, I think, only two in this large district, though quite a number have power under the Mines Inspection Act to perform similar services, and would doubtless be gladly accepted by this Department if they could be persuaded to take the trouble to apply.

Sanitation.—Lime washing, painting, ventilation and general cleanliness of factories have received due attention, and I have found but little occasion to complain. The absence of any sewerage system is a drawback, and if the much talked of woollen mills, or any other large factories are established, septic tanks will become inevitable.

Structural Alterations.—It has been necessary in three cases to compel the owners of premises used as factories to effect alterations and repairs to bring them into conformity with the Act.

Fencing Machinery.—Nearly the whole of the machinery at the sawmills hitherto unregistered was found to be unguarded and therefore dangerous, and the occupiers were duly notified to carry out the work required to render it safe. An effective guard for mincing-machines used in the manufacture of butchers' small-goods has been introduced throughout the district.

Accidents.—Only two accidents have been brought under the notice of the Department. In one case a cabinet-maker's apprentice lost one finger and suffered injury to two others while working at a circular moulding machine. An approved and thoroughly effective guard which was provided had been removed while the machine was being adjusted, and the lad had failed to replace it. In the other case a boy under 16 years of age, who was engaged in a printing office as messenger and newspaper delivery boy, endeavoured to print some envelopes at a platen, a machine prohibited to boys of that age. The employer, who was absent at the time, had on more than one occasion warned the boy against going to any of the machines. The lad's fingers were crushed, but not permanently injured.

Overtime.—I found in one of the larger towns, on account of Christmas trade and the impossibility of obtaining additional suitable workers, that two occupiers of factories had each employed a number of female workers on overtime on more than three consecutive days for some weeks. They had also failed to report that any overtime had been worked. Both of these breaches of the Act might have been avoided had the employers taken the trouble to make themselves conversant with its provisions. In both cases a copy of the Act had been hanging in the workrooms for years, but neither had so far realised his responsibilities as to read through even those sections which affected his particular class of factory. In this regard these two occupiers are by no means exceptions to the general rule.

Mr. Inspector Waugh (South Coast) reports :—

Registrations.—During the year a number of new factories were registered, the majority, however, being re-registration.

Sanitation.—The sanitary conditions in the district are fairly good, seeing that there is no sewerage system in any part of the South Coast. I received every assistance from officers of Shire and Municipal Councils.

Fencing Machinery.—As a rule occupiers of factories readily carry out instructions to guard dangerous machinery, and only in one case during the year was action taken; this occupier was warned on several occasions, but refused to carry out instructions to guard a hydro. He was fined £2 with 8s. costs, and was directed to guard the hydro within one month.

Accidents.—No fatal accident happened in the district during 1923, and fewer minor accidents than in 1922.

Bakehouses.—Very little trouble is now experienced in getting occupiers to keep their premises clean.

Certificates of Fitness.—It is now fully understood that certificates of fitness must be obtained in respect to young persons under 16, where required by the Act and regulations.

Boiler Inspections.—I have paid attention to the matter of exhibiting of certificates to comply with regulations.

General.—I have to report that during 1923 all classes of work have been fairly brisk, the building trade showing a marked improvement. The Metal Manufactures Ltd. at Port Kembla added an important department to their works, where 70 girls and an equal number of boys are employed on telephone cables. Over 700 persons are employed by this company, and some very valuable machinery has recently been installed.

Mr. Inspector Wallace (South Western) reports :—

Registrations.—A large number of registrations have been effected during the year, particularly in connection with bakehouses, electric generating plants, ice manufacturing, rabbit-packing, and smallgoods factories.

Structural Conditions.—Improvements were carried out in several factories throughout the district with beneficial results. The greater part of the work was carried out as the result of my suggestions during interviews with owners of premises, otherwise by requiring the occupiers to interview the owners with the object of having the alterations carried out. In minor matters the occupiers were required to effect the improvements.

Sanitation.—Although there has been a marked improvement in the sanitary conditions in the district, a great deal requires to be done in bringing several towns to a higher standard of sanitation, particularly in some of the larger towns. In certain towns the system and location of sanitary conveniences adjacent to food manufacturing and other factory premises has been the subject of complaint by me personally to the authorities concerned. In several cases new accommodation and removal to a suitable site has been the result. Further action on the lines to be desired will be continued during the ensuing year.

Fencing.—A large number of notices to fence and guard machinery has been served upon occupiers, also improvements to existing fencing carried out in several factories.

In connection with the purchase of several types of machines in the city by occupiers in the country, it is notable that the machines are not fitted by the "makers" with the requisite guards, particularly circular saws and benches, emery wheels with stands, jointers and lathe change wheels. Mincing machines should be improved by the makers so that the necessary hopper guards would be fitted to machines when purchased.

Accidents.—No fatal accident occurred in the district during the year. There were several accidents of a light nature, and a few of a serious nature. At a joinery shop a youth under 16 years, while assisting the "sawyer" with timber, slipped and fell forward with his right hand on the revolving circular saw. In a second joinery shop a youth aged 16 years met with a serious accident. During the time the machinist left the machine to interview a sawyer the youth went under the fence to clean out the shavings from under the mill gearing. He then returned to cross over the rear fence, first stepping over a revolving shaft, when his trousers caught in the bolts of coupling, and the back of his right knee and calf was badly torn.

Fire Escapes.—Only a small number of factories are effected by the provisions, principally flourmills. In the case of one fire escape it was necessary to have the woodwork of landing renewed.

Overtime.—Only one notice received of overtime worked during the year.

Bakehouses.—One new bakehouse was erected at Grenfell. After the plan of a good type bakehouse had been approved, a baker from Sydney arranged about taking same over, and influenced the owner to change the design and provide for the erection of a chimney adjacent to oven and other material alterations, which, since completion, have proved a failure. Eventually the owner will be compelled to effect alterations for the proper working of factory in accordance with the original design. At the end of the year three new bakehouses were in course of erection at Goulburn, Binalong, and Bribarce. Structural alterations and improvements were carried out in several bakehouses. A large number of notices were issued in connection with lime-washing and required cleanliness.

Certificates of Fitness.—In a small number of cases the provisions of this section were enforced.

General.—Large woollen mills are in course of erection at Bradville, North Goulburn. The greater part of the buildings are nearing completion. It is expected that the installing of machinery will be commenced during the latter end of February next, and manufacturing operations commenced about the beginning of May. In conjunction with the industry, it is proposed to erect a well-appointed hostel for female employees, and workmen's cottages. When completed, this should be a model village for employees. To commence there will be at least sixty female operatives and about twenty male operatives. During the year additional electrical plant has been installed at Canowindra. At the Goulburn Municipal Power House an additional 510 h.p. steam plant and generators were installed, bringing the total h.p. to 1,038. It is proposed to further augment the plant by another 510 h.p. as soon as the machinery arrives. The Goulburn electric light plant is stated to be larger than any provincial plant in the Commonwealth.

Mr. Inspector Durack (Southern) reports :—

Registrations.—During the year under review, with the exception of one butter factory, there were no new industries registered in my district. There were several changes of ownership, however, of established industries, particularly in the motor engineering business, where I had in most cases to suggest several additions at the time of my visit. It is, however, very pleasing to notice in this connection that my directions were invariably attended to.

Fencing of Machinery.—I have applied myself vigorously to the matters coming within the scope of this section, as the danger arising from unfenced machinery is always in the mind of the factory inspector. Yet, on the whole, I found that, when instructions were given to occupiers resultant from unfenced machinery, these directions were always carried out. Reference must be made this year, as in the past, to a certain reluctance on the part of sawmill owners to securely fence and guard circular saws, and in two instances the occupiers had to be prosecuted before the directions given by me were effected.

Sanitation.—This is a matter which has taken up a good deal of my time—because of the fact of there being no sewerage system in most of the outlying towns. As a result, one has to be very careful and examine every convenience in all towns visited during the year. Although the Health inspectors in many of these places attend to their duties fairly well, on many occasions I had to insist upon more satisfactory and more up-to-date methods in lavatory accommodation when I found that the health of the operatives would be endangered by the methods in use.

Accidents.—There were two serious accidents during the year. An operative working on a saw-bench was struck by a splinter of wood coming off the fliteh he was then cutting. He was struck on the head and instantly killed. It was found at the inquest that there was no guard on the saw at the time, thus clearly showing the necessity, as before-mentioned, of having this most dangerous type of machinery, viz., a circular saw, securely feneed and guarded. In the second ease, a woman, not an employee, went to see her father at a power-house used in the generating of electricity. One door of the passage-way at the back of the switchboard had been removed, allowing the woman to go into this passage to adjust her clothing. She accidentally placed her hands on one of the bus-bars, which had the effect of killing her within a few minutes. These were the only accidents reported by the occupiers during the year.

Fire Escapes.—With the exception of a few flourmills there are no fire escapes in this district.

Bakehouses.—The conditions in bakehouses on the whole are very fair, but in out-back towns there are many old premises and out-of-date struetures still remaining. When lime-washing is done regularly and sanitary arrangements are properly attended to, there is very little cause for complaining.

Overtime.—There has been no overtime worked in this district during the year.

General.—This district ineludes all towns on the main Southern line, as well as towns south of Murrumburrah. Therefore, it will readily be seen that it is not by any means an easy proposition to pay a visit as regularly as one would wish. Yet, most particularly, the larger of these towns have had at least two visits from me—in many cases three or four—during the year just elosed.

Mr. Inspector Baker (Western) reports :—

There were no changes to the boundaries of my district during 1923. I carried out general inspeetions over the whole area, and with the exeeption of the extreme north-east eorner (Gilgandra to Coonamble districts) visited all towns twiee. The Gilgandra-Coonamble section was visited once only. During the first six months of the year the unreliable condition of the old Departmental ear caused me a lot of inconvenienee, but in July this condition was rectified, a new Ford car having been supplied by the Department for work in the district. On account of the very limited train serviee in many portions of my district I find the ear of the greatest assistance and the chief factor in redueing travelling expenses to a minimum. As an illustration, I might here mention that a tour of general inspections from Narromine to Cobar (including Warren), which usually occupies at least ten days when the train service is employed, was completed by me, in the car, in November last in four and a half days. This tour was carried out during an intense heat-wave, and the engine evaporated water at the rate of 1 gallon for every 10 miles.

Registrations.—There was a fairly substantial increase in factory registrations during the year. This was brought about chiefly by the special efforts made by the Department to locate unregistered "bush sawmills" and other portable plants, such as "chaffeutters." Mr. Inspector Bennet was engaged on this work for some months, in the northern portion of the district, and located a large number of these classes of factories. On account of droughts, bad seasons, and the closing down of mines, several of the far western towns show a decrease in the number of factory registrations, and there appears to be no early chance of this unsatisfactory state of affairs being remedied.

Sanitation.—Speaking generally, the factories in the district were found to be kept in a fairly satisfactory condition. When necessary I instructed occupiers to paint or lime-wash the walls and ceilings of workrooms, to clear trade litter from floors or under benches and tables. Several plans of proposed new factories were submitted to me for examination, and in all such cases I directed the attention of the owners, contractors, or builders to any defects which the plans or specifications disclosed, and had the same remedied.

Hoods and flues were ordered to be affixed over melting-pots and other heating apparatus for the purpose of carrying off fumes and exhaust gases to the outer air. Users of gas or oil engines were instructed to affix exhaust pipes of sufficient length to insure of the exhaust gases being conveyed without the building. For the purpose of improving the atmospheric conditions in several of the smaller bakehouses, I instructed occupiers or owners to affix large ventilators in the ceilings. I found premises being used as a bakehouse, in one of the smaller towns, structurally defective, and the owner was served with the customary notice to make necessary improvements. In a few instances I found it necessary to instruct owners of factory premises to provide the regulation screens at closet accommodation.

Although all plans of proposed new buildings or alteration to existing buildings, if within a municipality, have first to be submitted to the local municipal authorities for their approval, no provision appears to be made in the case of buildings to be used as factories, to insure of factory regulations being also complied with.

Fencing of Machinery.—This important matter received my close attention during the year, and improvements were made in a number of instances. The younger generation of employers and employees appear to appreciate the benefits to be derived from machinery when properly guarded to a far greater extent than did those of the past. The Workmen's Compensation Act is, in my opinion, very largely responsible for the better observance of section 33 of the Act. Occupiers find that efficient guarding not only protects the life and limb of the employee but also their own pockets. There are still a small number of users of machinery who consider guards unnecessary, and who attempt to satisfy the inspector's requirements by putting up any old kind of makeshift. They find, however, that this is only a waste of time and money, as they receive notice, and a short one, too, to remove the structure and to affix an approved type of guard. As mincing-machines used by butchers and smallgoods manufacturers had been responsible for a number of accidents throughout the State, I instructed the users of such machines in this district to provide and maintain the guard approved by the Department. The guard is very highly spoken of by mincing-machine users in this district.

Boiler Inspection.—The certificate of all boilers used at factories visited by me during the year were examined, and where I found a boiler being used without a certficate the necessary instructions were given.

Accidents.—There were not many accidents during the year, but three terminated fatally. The first fatality occurred at an emery wheel in a small cycle and motor-cycle repairing factory. The person killed was

was the manager. It appears that for some reason the deceased removed the grinding wheel supplied with the machine and put on another of much larger dimensions. On account of the size of this wheel the proper turned washer, which is largely responsible for gripping emery wheels, could not be replaced, and an ordinary black iron washer was substituted. For the same reason the guard could not be replaced. Before being in motion five minutes the stone burst, one portion striking the operator's head, inflicting injuries to the skull and brain, from which he died a few hours later. The second fatality occurred at a large freezing works, and was investigated by Mr. Inspector Bennet, who re ers to it in his annual report. The third fatality occurred at a bush sawmill. The person killed was a bench man, operating a Spot saw. The evidence at the inquest disclosed that at the time the saw was not guarded. A cut had been completed and the bench man attempted to lift the off-cut from the inside of the saw. Whilst leaning across the revolving blade his feet slipped on wooden boards over a sawdust pit, and his arms and side of his face came on to the saw. Both forearms were cut off and also one side of his face. He died whilst being conveyed to the hospital. A slight accident occurred at a steam laundry. A female employee, 16 years of age, was feeding a one-roller mangle over the top of the guard. She had three fingers slightly crushed and burned. A sawmill proprietor lost a small finger whilst attempting to adjust the packing at a circular saw while it was revolving.

Prosecutions.—No prosecutions were instituted during the year.

Fire Escapes.—No additions were made to factory buildings which required fire escapes.

Certificates of Fitness.—A number of employees were warned for breaches of section 45.

Overtime.—Practically none was worked during the year.

General.—An important addition was made to the district factories by the Orange Municipal Council's installation of an up-to-date electric light and power station. The modern equipped power house contains two Babcock and Wilcox boilers and two three-phase direct-coupled steam-driven alternators, each of 330 h.p. capacity. In a few months time I expect a very substantial increase in the number of local factories on account of electric power now being available.

Mr. Inspector Nolan (Western) reports :—

The district allotted to me covers that portion of the State from Doonside to Bathurst and from Wallerawang to Coonabarabran.

Registrations.—During the period under review no large factories were registered in my district. Applications for registration chiefly applied to factories where a change of ownership had taken place.

Structural Alterations.—Structural alterations of a minor character were found to be necessary in several factories, and in every case the alterations were completed without the necessity of serving a Minister's Order.

Sanitation and Ventilation.—This matter requires careful consideration, and care must be exercised to see that light, warmth, and fresh air, all of which are essential to the maintenance of good health, are provided in factories.

Fencing and Guarding of Machinery.—This section of the Act has been fairly well observed, and no great difficulty has been experienced in seeing that its provisions are complied with. Most occupiers will readily comply with directions to securely fence or guard dangerous machinery. The main difficulty is to see that the guards are constantly maintained, and it is frequently met with in factories where small oil engines started by hand are used. Should the fencing be constructed of solid uprights with sliding or removable rails, the tendency is to leave the rails down after they have been removed to permit of the engine being started. The fixing of a gate in the form of a guard at the side of the engine in question is, in my opinion, the best form of protection, as the gate is more likely to be closed than are the rails to be replaced. With reference to the observance of this section of the Act, I wish to say again that I find occupiers still taking great interest in matters connected with safeguarding of dangerous machinery. Most of them realise that in addition to the legal obligations imposed upon them to guard danger points, there is also a moral obligation to take such precautionary measures as will prevent persons working under their charge from meeting with injury.

Accidents.—Compared with previous years the year just passed has produced fewer accidents of a serious nature. One fatal accident occurred. The employee concerned mounted a staging about 8 feet from the floor to attend to certain machinery. A belt was in use to drive a machine, and it is surmised, as no one saw the accident, that the belt was slipping off the pulley when the man attempted to push it back with his foot, and in so doing his foot slipped, and straddling the belt he was drawn into the pulley and killed instantly. A serious accident occurred resulting in the man concerned losing part of his leg. He was working near an underground conveyor, which was covered with iron plates and held in position by butterfly nuts. Occasion arose to remove the plates, but the butterfly nuts had not been replaced when the job was completed. A choke occurred in the conveyor and the material forced the plates out of position and on to the floor. The man not knowing that the plates had shifted, stepped forward, and into the conveyor pit, with the result abovementioned. He had been working near this machine for nine years and had never known the plates to shift before.

Fire Escapes.—Only one factory needed attention under this heading. At a flourmill a fire escape was necessary owing to additions to the building. The necessary steps were taken to have a fire escape erected.

Bakehouses.—The standard of cleanliness in bakehouses has been well maintained. The chief difficulty in bakehouses is the discoloration caused by the escape of smoke and steam from the fire-box and through the oven door, and fumes from the fire through the same outlets tend, to some extent, to poison the atmosphere in the bakehouse. Provision is made at almost every oven to carry off smoke and steam by a flue directly over the oven door, but owing either to faulty design or construction, very few of the flues are effective. To overcome this trouble I have issued instructions to the occupier to fix a canopy, with a flue in the centre, leading to the outer air, over the oven door and fire-box. This system has proved effective, and has given general satisfaction where used.

Certificates of Fitness.—The provisions of this section of the Act were well observed.

Mr.

Mr. Senior Inspector Dunleavy (Broken Hill) reports :—

Early in the year I took charge of the Broken Hill district, which is well known throughout the world as a producer of silver-lead zinc ores. Owing to the mining and treatment plants being under the supervision of the mining inspectors there are a large number of operatives who do not obtain the benefit of the provisions of the Factories and Shops Act. The factories in this area are few, and consequently the number of persons employed is limited. During the year the district suffered periods of depression, brought about in most cases by outside causes, such as the coal-mining dispute and the horse-drivers' dispute at Port Pirie, S.A., which prevented concentrates being taken to that port for some time. In addition a fire occurred at the Central mine, and a large number of men found themselves out of employment. The district has also suffered a long period of dry weather, and some anxiety was felt owing to the prospects of the water supply giving out at an early date. Fortunately, rain fell in June last and gave some relief, and in December over 3 inches of rain fell and replenished the fast-failing water supply, and so relieved all anxiety.

Registrations.—A number of small factories were registered during the year; included amongst them were changes of ownership of existing factories.

Sanitation.—Owing to the absence of a sewerage system in the district, coupled with the severe duststorms that envelop the area at times, together with the lay of the country where most of the factories are situated, not being suitable for adequate drainage, and the added difficulty of seepage from the mines, which percolates the soil and lodges in the cellars of many buildings in the main street, necessitating pumping operations, it can easily be seen that the question of sanitation is a difficult one. Notwithstanding all the above-mentioned disabilities, I have made every effort to minimise the dangers that may arise under the unfavourable circumstances, and have received the co-operation of all concerned.

Fencing and Machinery.—I have given this matter much care and attention, and have caused a number of occupiers to exercise more care in making dangerous machinery safer, and urged upon them the necessity of maintaining the guards provided. I have insisted that all power-driven sausage-machines should be effectively guarded. A special type of guard has been provided by all occupiers, and, if kept in position, should eliminate the chance of accident. A number of firewood cutting plants had loose splinter boards, that were called guards, hanging loosely over their circular saws. I arranged for an improved type of guard to be placed over every saw, and the guards have proved very effective. At first some of the occupiers were averse to making the change, but since falling into line they appear to be satisfied.

Accidents.—I am pleased to report that there were no serious accidents in my district during the year. The only accident that occurred was caused through an operative getting the tip of his finger caught in a jointer.

Bakehouses.—Bakehouses have received a fair share of my attention, and in a number of instances I have given notices to clean up and limewash. The duststorms cause much anxiety and inconvenience to bakers, and most of them appear to do exceedingly well in keeping their factories clean under the trying circumstances.

Certificates of Fitness.—I have had occasion to caution some occupiers for not obtaining certificates for persons under section 45. In all cases the omission appeared to be carelessness rather than intent.

Mr. Inspector T. Gordon Bennet (Outlying Districts) reports :—

In the month of May I was attached to the Western District, with headquarters at Dubbo, and my instructions were to give special attention to " travelling plants " in outlying districts.

As a result of six months' work, somewhat hampered by adverse weather conditions, I travelled a distance exceeding 3,000 (three thousand) miles by the Departmental motor car in the area bounded by the undermentioned towns :—Bourke, Cobar, Forbes, Orange, Merrygoen, Coonamble and Brewarrina. From several towns some, long distances into the bush, where there are no roads, are worthy of mention.

Sawmills	30	miles from Girilambone.	Sawmills,	21	miles from Nyngan.
45 and 55	,,	Warren.	35	,,	Coonamble.
49	,,	Dubbo.	25	,,	Mendooran.
27	,,	Gilgandra.	27	,,	Peak Hill.

The condition of the country " tracks " leading to bush sawmills is very unsatisfactory, but, in spite of such bad travelling conditions, I visited the major portion of the area allotted to me. Of 54 sawmills visited, 41 had not been registered, 43 circular saws were unguarded, and 39 boilers, with varying pressures up to 125 lb. per square inch, had never been inspected. These figures speak for themselves, and prevailing conditions disclosed a serious want of knowledge of safety appliances and their application, and I was able to give information and mechanical assistance, which seemed to be much appreciated. I am satisfied that the provision of motor-cars for inspectors' use is compulsory in certain areas and wholly justifiable on economical grounds. I devoted considerable time to the fencing and guarding of machinery, particularly circular saws and Spot saws, with gratifying results.

Considerable attention was given to the observance or otherwise of the boiler regulations. I found that, due to great distances, difficulty of transport, and the big expense incurred, a large number of boilers were in a serious state of disrepair. I attempted to ease matters by suggesting that sawmillers should combine and engage a licensed inspector and " frank " him from mill to mill in a given district.

Due to the prolonged drought, I only came across one chaff-cutting plant which came under the Factories Act, but from viewing several private plants, mostly lying idle, I anticipate there will be a big field for inspection when the drought breaks.

A fatal accident, which I investigated, occurred at a large country freezing works. The blow-down pipe of the boiler was underground 7 inches, and it was the duty of the fireman of the morning watch to " blow down." On this occasion after opening the cock, the pipe split, and the escaping steam and water made a large hole in the ground. It is assumed the engine-driver, in attempting to " shut off," fell into the hole of boiling mud, and extricating himself, crawled 50 yards to the engine-room, blew the whistle, and died shortly after reaching hospital. The second engineer fell into the same hole and was seriously scalded.

Appendix I.

Persons employed, by Class of Factory, Classified by Industry—1923.

THE STATE.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 1.—TREATING RAW MATERIAL, THE PRODUCT OF PASTORAL PURSUITS.												
(*a*) *Animal Products.*												
Boiling-down and tallow-refining ..	9	1	... ..	2	.....	17	... ...	101	.....	121	.....	121
Glue	2	.....	7	2	14	3	24	75	13	80	58	138
Tanning	74	41	1	40	3	53	1	972	7	1,106	12	1,118
Wool-scouring and fellmongering ...	36	4	.....	22	4	54	5	731	8	811	17	828
Other animal products...	9	43	.....	45	.....	30	.....	199	1	317	1	318
Total	130	89	8	111	21	157	30	2,078	29	2,435	88	2,523
(*b*) *Vegetable Products.*												
Chaff-cutting	122	.....	.....	4	.....	8	.....	372	.....	384	.....	384
Total, Class 1...	252	89	8	115	21	165	30	2,450	29	2,819	88	2,907
CLASS 2.—OILS AND FATS—ANIMAL AND VEGETABLE.												
Oil and grease	13	7	.....	4	3	8	.....	172	.....	191	3	194
Soap, candles, &c.	23	31	37	31	64	77	61	382	93	521	255	776
Total, Class 2...	36	38	37	35	67	85	61	554	93	712	258	970
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &C.												
Asphalt	10	1	.....	1	.....	4	.....	53	.....	59	.....	59
Bricks and tiles...	141	109	.....	182	.....	244	11	2,761	14	3,296	25	3,321
Glass and glass bottles	11	5	.....	26	.....	92	.....	689	.....	812	.....	812
Glass (ornamental)	30	23	.....	57	1	67	.....	314	1	461	2	463
Lime, plaster, and cement	18	4	.....	10	.....	18	.....	544	.....	576	.....	576
Marble and slate	12	.....	.....	1	.....	9	... ..	144	.....	154	.....	154
Modelling and fibrous plaster... ...	20	12	.....	25	.....	41	.....	189	.....	267	.....	267
Monumental masonry	34	1	.....	3	.....	10	.....	180	.....	194	.....	194
Pottery and earthenware	19	69	.....	63	.....	60	.....	525	.....	717	.....	717
Stone-dressing	47	7	.....	5	.....	12	.....	1,004	.....	1,028	.....	1,028
Other works	27	4	.....	13	.....	21	.....	349	.....	387	.....	387
Total, Class 3	369	235	.....	386	1	578	11	6,752	15	7,951	27	7,978
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	1	.....	.....	.....	.....	.....	.....	3	.....	3	.....	3
Boxes and packing-cases	67	26	.....	62	.....	75	.....	542	.....	705	.....	705
Cooperage	12	10	.....	15	.....	23	.....	229	.....	277	.....	277
Joinery	302	85	2	322	.....	318	.....	2,495	1	3,220	3	3,223
Saw-milling—Timber	572	45	.....	234	.....	330	2	3,693	2	4,302	4	4,306
Firewood	200	.....	.....	6	.....	4	.....	295	.....	305	.....	305
Wood-turning	22	6	.....	5	.....	15	.....	68	.. ...	94	.....	94
Other works	49	12	.....	28	1	46	1	280	1	366	3	369
Total, Class 4	1,225	184	2	672	1	811	3	7,605	4	9,272	10	9,282
CLASS 5.—METAL WORKS, MACHINERY, &C.												
Agricultural implements	19	6	.....	16	.....	28	.....	156	.....	206	.....	206
Brass and copper	67	29	.....	239	36	149	22	949	20	1,366	78	1,444
Cutlery	31	4	.....	18	.....	18	.....	85	.....	125	.....	125
Engineering	357	149	.....	524	3	1,004	5	6,242	10	7,919	18	7,937
Galvanised iron	59	27	.....	116	.....	105	.....	651	.....	899	.....	899
Iron works, foundries, & boilermaking	164	122	.....	295	3	454	5	6,850	14	7,721	22	7,743
Iron safes and doors	4	2	.....	5	.....	8	.....	76	.....	91	.....	91
Lead-mills	2	.....	.....	2	.....	1	.....	30	.....	33	.....	33
Railway carriage works	3	1	... ..	5	.....	22	.....	143	.....	171	... ...	171
Smelting and ore dressing	8	.....	.....	7	.....	14	.....	380	.....	401	.....	401
Stoves and ovens	22	42	.....	90	3	96	7	716	7	944	17	961
Tinsmithing	25	97	15	140	56	182	98	646	101	1,065	270	1,335
Wire-working	16	38	.....	265	.....	249	.....	1,039	.....	1,591	.....	1,591
Other metal works	98	102	11	145	19	231	12	1,017	2	1,495	44	1,539
Plumbing	34	8	.....	33	.....	43	.....	310	.....	394	.....	394
Farriery	37	3	.....	9	.....	7	.....	108	.....	127	.....	127
Total, Class 5...	937	630	26	1,909	120	2,611	149	19,398	154	24,548	449	24,997
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(*a*) *Animal Food.*												
Bacon	18	.....	.....	3	.....	9	.....	182	.....	194	.....	194
Butchers' smallgoods	813	5	.....	25	.....	61	... ..	1,039	6	1,130	6	1,136
Margarine	2	3	.....	5	... ..	20	.....	98	.....	126	.....	126
Meat-preserving	11	.....	.....	.....	.....	2	4	53	10	55	14	69
Total	844	8	.....	33	.....	92	4	1,372	16	1,505	20	1,525

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 6.—CONNECTED WITH FOOD AND DRINK AND THE PREPARATION THEREOF—*continued.*												
(*b*) *Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.*												
Biscuits	9	212	234	135	212	92	231	278	277	717	954	1,671
Bread and pastry	1,383	54	7	305	15	313	18	2,725	127	3,397	167	3,564
Confectionery	212	67	107	97	298	112	3.1	591	271	867	1,047	1,914
Corn-flour and oatmeal	14	5	14	4	25	12	44	215	58	236	141	377
Flour-milling	63	1	... ..	28	.....	45	.....	618	.....	692	... ..	692
Jam and fruit preserving	27	3	9	17	28	53	31	238	199	311	267	578
Pickles, sauces, and vinegar	9	1	5	6	6	24	26	59	62	90	99	189
Poultry foods and dog biscuits	9	2	.....	13	.....	7	.....	153	.....	175	.....	175
Self-raising flour	4	...	5	4	5	4	23	10	10	18	43	61
Sugar-refining	5	3	1	8	5	13	1	575	10	599	17	616
Total	1,735	348	382	617	594	675	745	5,462	1,014	7,102	2,735	9,837
(*c*) *Drinks and Stimulants.*												
Aerated waters and cordials	174	29	1	89	3	107	39	567	23	792	66	858
Brewing	17	1	.....	6	.....	41	.....	845	.....	893	.....	893
Condiments, coffee, spices, &c.	46	54	156	33	191	47	281	336	232	470	860	1,330
Distillery	2	...	.....	...	.....	1	.....	48	.....	49	.....	49
Ice and refrigerating	216	13	.....	36	.....	35	.....	805	1	889	1	890
Tea blending and packing	16	29	25	14	38	18	51	75	63	136	177	313
Wine, spirits, and beer bottling	57	7	.....	31	1	39	7	238	44	415	52	467
Total	528	133	182	209	233	288	378	3,014	363	3,644	1,156	4,800
(*d*) *Narcotics.*												
Tobacco, cigars, and cigarettes	17	42	137	80	188	115	275	560	613	797	1,213	2,010
Total, Class 6	3,124	531	701	939	1,015	1,170	1,402	10,408	2,006	13,048	5,124	18,172
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(*a*) *Textile.*												
Woollen mills	12	48	94	62	121	58	202	517	526	685	943	1,628
(*b*) *Dress.*												
Boots and shoes:—Order made	445	25	1	62	1	72	2	783	11	942	15	957
Factory made	109	130	283	221	368	221	353	2,134	985	2,706	1,989	4,695
Clothing:—Men's slops	91	38	356	48	487	68	530	550	1,325	794	2,698	3,492
Women's slops	151	9	294	6	400	13	508	86	1,365	114	2,567	2,681
Tailoring	409	24	252	70	486	85	539	1,337	1,909	1,516	3,186	4,702
Corsets	9	2	35	3	67	3	115	10	170	18	387	405
Dressmaking and millinery:—												
Makers' material	161	8	348	7	496	6	593	20	1,260	41	2,697	2,738
Customers' material	186	...	129	...	171	...	184	4	5 3	4	1,027	1,031
Dye works	30	3	2	11	8	19	19	125	90	158	119	277
Furriery	15	4	18	14	23	14	23	33	71	65	135	200
Hats and caps	32	26	83	46	111	49	170	313	332	434	696	1,130
Hosiery and knitting	68	22	183	53	441	76	606	210	639	361	1,869	2,230
Oilskin and waterproof clothing	11	...	2	...	1	..	8	11	18	11	29	40
Shirts, ties, and scarves	55	11	271	23	359	34	375	92	731	160	1,736	1,896
Umbrellas	6	1	6	4	15	2	28	22	36	29	85	114
Underclothing	92	5	165	8	196	3	223	39	514	55	1,098	1,153
Wigs and hair work	11	...	3	...	15	..	24	3	23	3	65	68
Total	1,881	308	2,431	576	3,645	665	4,300	5,772	10,022	7,321	20,398	27,719
(*c*) *Fibrous Materials and Textiles not elsewhere included.*												
Bags and sacks	11	19	42	21	49	17	96	78	97	135	284	419
Rope and twine	10	18	12	54	15	46	10	74	5	192	42	234
Tents and tarpaulins	11	5	7	7	9	6	10	35	70	53	96	149
Total	32	42	61	82	73	69	116	187	172	380	422	802
Total, Class 7	1,925	398	2,586	720	3,839	792	4,618	6,476	10,720	8,386	21,763	30,149
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	18	9	.....	12	4	13	3	77	16	111	23	134
Electrotyping and stereotyping, type founding, and printers' materials.	21	14	17	17	10	19	9	92	6	142	42	184
Paper bags and boxes	15	36	146	55	189	54	263	196	255	341	853	1,194
Paper mills, cardboard, and straw-board	5	14	14	17	23	26	36	270	47	327	129	447
Photo.-engraving, photo.-lithography, and photo. materials	53	9	37	26	56	31	89	156	215	222	397	619
Printing, bookbinding, and manufacturing stationery	495	286	245	526	351	528	409	4,018	729	5,358	1,734	7,092
Total, Class 8	607	368	459	653	633	671	809	4,809	1,268	6,501	3,169	9,670
CLASS 9.—MUSICAL INSTRUMENTS, &C.												
Pianos, organs, and sewing-machines.	30	29	2	58	7	75	28	474	20	636	57	693
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	5	3	.....	1	2	4	.....	21	1	29	3	32

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY, HARNESS, &C.												
Coaches and waggons	251	44	1	181	1	192	3	1,249	1	1,666	6	1,672
Cycles and motor cars	641	153	2	396	6	487	12	3,023	31	4,059	51	4,110
Perambulators, &c.	8	15	.....	14	2	28	2	115	.....	172	4	176
Saddlery, harness, &c.	54	14	2	27	4	30	9	289	17	360	32	392
Naves, spokes, &c.	9	2	.....	8	.....	40	.....	94	.....	144	.....	144
Whips	3	...	.....	4	.....	1	.....	12	.....	17	.....	17
Total, Class 11	966	228	5	630	13	778	26	4,782	49	6,418	93	6,511
CLASS 12.—SHIPBUILDING, FITTINGS, &C.												
Docks and slips	4	...	.....	16	.....	87	.....	937	.....	1,040	.....	1,040
Sailmaking	8	...	2	...	2	1	5	33	28	34	37	71
Ship and boat building	32	1	.....	23	.....	65	.....	622	.....	711	.....	711
Total, Class 12	44	1	2	39	2	153	5	1,592	28	1,785	37	1,822
CLASS 13.—FURNITURE, BEDDING, &C.												
Bedding, flock, and upholstery	54	45	38	59	54	110	52	433	235	647	379	1,026
Carpet-sewing	3	...	3	1	5	1	11	12	33	14	52	66
Iron Bedsteads	5	17	.....	18	.....	26	2	191	.....	252	2	254
Billiard tables	1	1	1	12	8	7	2	76	5	96	16	112
Chair-making	17	10	.....	29	.....	42	.....	163	.....	244	.....	244
Furniture and cabinet making—												
European	247	85	.....	377	1	429	2	1,919	5	2,810	8	2,818
Chinese	36	...	.....	...	.....	1	.....	238	.....	239	.....	239
Bamboo and wicker	10	3	.....	7	.....	7	.....	70	2	87	2	89
Pictnre frames	28	7	1	11	5	8	12	80	31	106	49	155
Window blinds	9	9	7	7	4	10	2	51	17	77	30	107
Total, Class 13	410	177	50	521	77	641	83	3,233	328	4,572	538	5,110
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c.	19	11	38	13	72	10	70	58	50	92	230	322
Chemical works and drugs	63	34	50	42	103	54	156	281	206	511	515	1,026
Fertilisers	10	1	.....	...	.....	5	.....	138	.....	144	.....	144
Perfumes and essences	22	4	15	15	37	19	45	48	28	86	125	211
Paints and varnishes	20	47	6	39	3	52	10	386	28	524	47	571
Other Minor Works	3	...	...	2	3	3	2	10	3	15	8	23
Total, Class 14	137	97	109	111	218	143	283	1,021	315	1,372	925	2,297
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	29	2	6	8	15	20	4	71	14	101	39	140
Surgical instruments	5	1	2	3	.....	3	2	30	6	37	10	47
Other Minor Works	3	...	.....	2	.....	1	.....	5	.....	8	.....	8
Total, Class 15	37	3	8	13	15	24	6	106	20	146	49	195
CLASS 16.—TIMEPIECES, JEWELLERY, AND PLATEDWARE.												
Electroplating	29	19	3	35	11	31	4	166	3	251	21	272
Jewellery	79	5	10	29	13	62	18	369	38	465	79	544
Total, Class 16	108	24	13	64	24	93	22	535	41	716	100	816
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	91	52	13	202	18	302	20	672	36	1,228	87	1,315
Electric light and power works*	319	5	.....	27	.....	61	.....	1,068	.....	1,161	.....	1,161
Gas works	43	5	.....	11	.....	16	.....	1,272	.....	1,304	.....	1,304
Lamps and gas mantles	7	4	2	6	9	6	44	48	40	64	95	159
Hydraulic power	2	...	...	1	.....	1	.....	18	.....	20	.....	20
Coke works	12	21	.....	35	...	14	.....	667	.....	737	.....	737
Total, Class 17	474	87	15	282	27	400	64	3,745	76	4,514	182	4,696
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy leather	26	9	33	15	48	17	47	114	54	155	182	337
Leather belting	5	6	...	4	.....	8	.....	39	.....	57	.....	57
Portmanteaux	9	49	.....	33	7	55	14	182	48	310	69	379
Other Minor Works	23	24	23	20	30	20	30	95	40	159	123	282
Total, Class 18	63	79	56	72	85	100	91	430	142	681	374	1,055
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting	6	3	..	1	1	8	1	96	13	108	15	123
Brooms, brushes	29	20	13	24	18	44	19	176	38	244	88	332
Florists and seedsmen	9	1	9	1	10	1	11	19	5	22	35	57
Laundries—European†	155	4	66	10	185	18	334	239	1,040	271	1,625	1,896
Chinese	30	...	...	...	...	...	.....	31	2	31	2	33
Rubber goods	9	34	9	36	33	53	92	489	272	612	406	1,018
Toys	29	13	16	18	28	14	15	51	11	96	70	166
Painting and sign-writing	17	3	3	11	1	19	2	234	1	267	7	274
Other Minor Works	25	...	15	21	31	23	47	125	48	169	141	310
Total, Class 19	309	78	131	122	307	180	521	1,440	1,430	1,820	2,389	4,209
Total, All Industries	11,058	3,279	4,210	7,342	6,474	9,474	8,212	75,831	16,739	95,926	35,635	131,561

* Including 252 electric lighting plants for picture shows, employing 226 persons.

† Charitable institutions doing outside laundry work are included in the number of factories registered.

Appendix II.

Factories, by Number of Persons employed—1919-1923.

Year.	Number of Factories in which the number of persons employed is—															Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																
1919	2,247	1,398	744	319	161	175	76	43	72	45	23	9	4	7	5	2	5,330
1920	2,640	1,452	752	335	169	178	99	54	70	33	27	10	4	7	8	4	5,842
1921	2,603	1,604	751	340	187	152	96	44	78	22	26	10	6	8	3	4	5,934
1922	2,912	1,648	776	342	206	161	103	49	73	34	32	8	7	10	3	3	6,367
1923	3,147	1,647	763	347	171	198	99	44	66	37	25	14	3	8	5	3	6,573
Newcastle District.																
1919	492	202	103	26	13	10	3	3	6	2	4	...	1	...	...	1	866
1920	528	238	94	29	11	14	3	3	9	..	5	..	1	...	...	1	936
1921	593	258	89	29	11	12	7	...	3	3	2	3	1	...	...	1	1,017
1922	676	269	86	28	15	9	5	..	5	2	4	...	...	...	1	...	1,100
1923	836	185	83	32	9	7	4	3	5	3	2	...	...	...	1	1	1,171
Rest of State.																
1919	1,909	638	175	48	17	8	1	3	1	3	1	2	..	1	...	...	2,807
1920	2,127	600	177	37	9	7	4	1	...	..	3	1	...	...	1	...	2,967
1921	2,195	707	170	25	18	7	3	1	4	2	..	2	1	1	..	..	3,136
1922	2,294	680	176	26	12	7	4	1	3	3	...	...	1	...	...	...	3,207
1923	2,587	475	183	34	14	4	3	2	6	1	2	...	...	2	1	...	3,314
State.																
1919	4,648	2,238	1,022	393	191	193	80	49	79	50	28	11	5	8	5	3	9,003
1920	5,295	2,290	1,023	401	189	199	106	58	79	33	35	11	5	7	9	5	9,745
1921	5,396	2,569	1,010	394	216	171	106	45	85	27	28	15	8	9	3	5	10,087
1922	5,882	2,597	1,038	396	233	177	112	50	81	39	36	8	8	10	4	3	10,674
1923	6,570	2,307	1,034	413	194	209	97	49	77	41	29	14	3	10	7	4	11,058

Appendix III.

Factories, by Class and Number of Persons employed, 1923.

Class of Factory.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																	
I. Treating raw material, product of pastoral pursuits	59	36	12	9	3	6	4	1	2	2	...	1	...	...	...	...	135
II. Oils and fats—animal, vegetable, &c	6	5	1	2	3	...	2	...	...	...	...	1	...	...	...	...	20
III. Processes relating to stone, clay, glass, &c.	54	49	40	25	22	15	7	4	4	1	1	1	...	1	...	...	224
IV. Working in wood	224	139	43	15	6	7	7	1	2	2	1	...	...	...	...	...	447
V. Metal works, machinery, &c.	315	204	99	33	17	23	17	5	9	8	4	1	1	...	2	...	738
VI. Connected with food and drink, &c.	988	230	81	25	20	18	6	5	7	4	2	1	1	4	2	1	1,395
VII. Clothing and textile fabrics, &c.	662	413	200	109	49	67	18	13	25	11	7	5	...	3	...	...	1,582
VIII. Books, paper, printing, engraving, &c.	136	119	56	42	9	19	8	4	6	4	5	1	1	...	...	...	410
IX. Musical instruments, &c.	15	1	8	2	2	...	...	...	...	...	...	1	...	...	...	...	29
X. Arms and explosives	2	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XI. Vehicles and fittings, saddlery, harness, &c.	217	142	40	15	6	13	6	2	1	1	1	...	...	...	...	...	445
XII. Ship and boat building, &c.	12	9	3	3	2	2	1	...	1	1	...	...	...	...	1	...	35
XIII. Furniture, bedding, &c.	130	95	60	23	12	8	4	4	6	2	...	...	..	...	...	...	344
XIV. Drugs, chemicals, and by-products	31	47	26	7	3	4	1	2	1	1	2	...	...	...	...	...	125
XV. Surgical and other scientific instruments	22	6	4	...	1	...	...	...	...	...	...	...	..	...	...	...	33
XVI. Jewellery and plated-ware, &c.	51	30	13	3	4	1	...	...	...	...	...	...	...	...	...	...	102
XVII. Heat, light, and power	106	28	20	11	2	5	6	1	...	...	1	1	...	...	...	1	182
XVIII. Leatherware (excepting saddlery and harness)	19	20	12	5	3	1	...	1	1	...	1	...	...	...	...	...	63
XIX. Minor wares not elsewhere included	98	72	49	18	7	9	3	1	1	...	...	...	...	...	...	1	259
Total	3,147	1,647	768	347	171	198	90	44	66	37	25	14	3	8	5	3	6,573
Newcastle District.																	
I. Treating raw material, product of pastoral pursuits	15	...	...	...	...	...	...	..	1	...	...	..	..	...	...	...	14
II. Oils and fats—animal, vegetable, &c.	3	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	6
III. Processes relating to stone, clay, glass, &c.	26	10	5	4	3	...	...	...	...	...	...	...	...	...	...	...	48
IV. Working in wood	125	50	29	6	1	2	...	1	...	...	..	...	...	...	...	...	214
V. Metal work, machinery, &c.	40	18	7	3	1	1	...	1	2	2	2	...	...	...	1	1	79
VI. Connected with food and drink, &c.	380	23	10	4	...	2	1	...	1	...	...	...	...	...	...	...	421
VII. Clothing and textile fabrics, &c.	65	33	12	7	1	1	2	1	1	...	..	...	...	...	...	...	123
VIII. Books, paper, printing, engraving, &c.	21	11	4	1	2	1	..	...	...	...	..	...	.	...	...	...	40
IX. Musical instruments, &c.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XI. Vehicles and fittings, saddlery, harness, &c	62	15	8	1	1	...	....	...	...	...	...	...	..	...	...	...	87
XII. Ship and boat building, &c.	4	3	2	...	...	...	...	..	...	...	...	...	...	...	...	..	9
XIII. Furniture, bedding, &c.	19	7	3	1	...	...	...	...	...	...	...	...	...	...	...	...	30
XIV. Drugs, chemicals, and by-products	4	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
XV. Surgical and other scientific instruments	3	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	3
XVI. Jewellery and plated-ware, &c.	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XVII. Heat, light and power	57	6	1	2	...	...	1	...	...	...	...	...	...	...	...	...	67
XIX. Minor wares, n.e.i.	12	3	2	3	...	...	...	...	...	...	...	...	...	...	...	...	20
Total	836	185	83	32	9	7	4	3	5	3	2	..	...	...	1	1	1,171

Appendix III—*continued.*

Class of Factory.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Rest of State.																	
I. Treating raw material, product of pastoral pursuits	69	20	13	1	...	...	...	..	...	...	...	...	...	...	...	...	103
II. Oils and fats—animal, vegetable, &c.	8	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10
III. Processes relating to stone, clay, glass, &c.	42	26	14	4	5	1	2	...	1	...	1	...	...	1	...	...	97
IV. Working in wood	376	117	59	8	3	1	...	...	...	...	..	...	...	...	...	...	564
V. Metal work, machinery, &c.	75	32	5	3	...	...	...	1	...	1	1	...	...	1	1	...	120
VI. Connected with food and drink, &c.	1,210	63	24	6	1	...	...	...	4	...	...	...	...	...	...	...	1,308
VII. Clothing and textile fabrics, &c	105	88	20	2	2	1	...	1	1	...	...	...	...	...	...	...	220
VIII. Books, paper, printing, engraving, &c.	111	29	13	3	1	...	...	...	...	...	...	...	...	...	...	...	157
XI. Vehicles and fittings, saddlery, harness, &c.	348	68	17	1	...	...	...	...	...	...	...	...	...	...	...	...	434
XIII. Furniture, bedding, &c.	28	6	2	...	...	...	...	...	...	...	...	...	...	...	...	...	36
XIV. Drugs, chemicals, and by-products	3	...	1	1	...	1	...	...	...	...	...	...	..	...	...	...	6
XV. Surgical and other scientific instruments	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XVI. Jewellery and plated-ware, &c.	2	1	...	...	...	...	...	...	...	...	..	...	...	...	...	...	3
XVII. Heat, light and power	191	15	12	4	2	...	1	...	...	...	...	...	...	...	...	...	225
XIX. Minor wares, n.e.i.	18	8	3	1	...	...	...	...	...	...	..	...	..	...	...	...	30
Total	2,587	475	183	34	14	4	3	2	6	1	2	...	...	2	1	...	3,314
State.																	
I. Treating raw materials, product of pastoral pursuits	141	56	25	10	3	6	4	1	3	2	..	1	...	...	...	..	252
II. Oils and fats—animal, vegetable, &c.	17	9	1	2	3	...	2	...	...	1	...	1	...	...	...	...	36
III. Processes in stone, clay, glass, &c.	122	85	59	53	30	16	9	4	5	1	2	1	...	2	...	...	369
IV. Working in wood	725	306	131	29	10	10	7	2	2	2	1	...	...	...	...	...	1,225
V. Metal works, machinery, &c.	430	254	111	39	18	24	17	7	11	11	7	1	1	1	4	1	937
VI. Connected with food and drink, &c.	2,578	316	115	35	21	20	7	5	12	4	2	1	1	4	2	1	3,124
VII. Clothing and textile fabrics, &c.	832	534	232	118	52	69	20	15	27	11	7	5	...	3	...	...	1,925
VIII. Books, paper, printing, and engraving, &c.	268	159	73	46	12	20	8	4	6	4	5	1	1	...	...	..	607
IX. Musical instruments, &c.	16	1	8	2	2	...	...	...	...	...	...	1	...	...	..	...	30
X. Arms and explosives	2	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XI. Vehicles and fittings, saddlery and harness, &c.	627	225	65	17	7	13	6	2	1	1	1	1	...	...	...	...	966
XII. Ship and boat building, &c.	16	12	5	3	2	2	1	...	1	1	...	...	...	...	1	...	44
XIII. Furniture, bedding, &c.	177	108	65	24	12	8	4	4	6	2	...	...	...	..	...	...	410
XIV. Drugs, chemicals, and by-products	38	49	27	8	3	5	1	2	1	1	2	...	...	...	...	...	137
XV. Surgical and other scientific instruments	26	6	4	...	1	...	...	...	...	...	...	...	...	...	...	...	37
XVI. Jewellery and plated-ware, &c.	54	33	13	3	4	1	...	...	...	...	...	...	...	...	...	...	108
XVII. Heat, light, and power	354	49	33	17	4	5	8	1	...	...	1	1	...	...	...	1	474
XVIII. Leatherware, n.e.i.	19	20	12	5	3	1	...	1	1	...	1	...	...	...	...	...	63
XIX. Minor wares, n.e.i.	128	83	54	22	7	9	3	1	1	..	...	...	...	...	...	1	309
Total	6,570	2,307	1,031	413	194	209	97	49	77	41	29	14	3	10	7	4	11,058

Appendix IV.

Persons employed, by Class of Factory, Classified by Industry—1923.

Metropolitan District.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Class 1.—Treating Raw Material, the Product of Pastoral Pursuits.												
(a) *Animal Products.*												
Boiling-down and tallow-refining	7	1	...	2	...	17	...	93	...	113	...	113
Glue	2	...	7	2	14	3	24	75	13	80	58	138
Tanning	68	41	1	38	3	51	1	914	7	1,044	12	1,056
Wool-scouring and fellmongering	17	4	..	22	4	43	5	624	8	693	17	710
Other animal products	6	37	...	17	...	14	...	93	1	161	1	162
Total	100	83	8	81	21	128	30	1,799	29	2,091	88	2,179
(b) *Vegetable Products.*												
Chaff-cutting	35	...	...	3	...	1	...	63	...	67	...	67
Total, Class 1	135	83	8	84	21	129	30	1,862	29	2,158	88	2,246
Class 2.—Oils and Fats—Animal and Vegetable.												
Oil and grease	9	7	...	4	3	8	...	166	...	185	3	188
Soap, candles, &c.	11	22	35	20	54	55	44	266	80	363	213	576
Total, Class 2	20	29	35	24	57	63	44	432	80	548	216	764

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.												
Asphalt	8	1	...	1	...	4	...	38	...	44	...	44
Bricks and tiles	65	100	...	152	...	202	11	2,082	13	2,536	24	2,560
Glass and glass bottles	11	5	...	26	...	92	...	689	...	812	...	812
Glass (ornamental)	28	23	...	54	1	64	...	308	1	449	2	451
Lime, plaster, and cement	7	1	...	5	...	8	...	62	...	76	...	76
Marble and slate	9	...	...	1	..	9	...	144	...	154	...	154
Modelling and fibrous plaster	19	7	...	17	...	38	...	178	...	240	...	240
Monumental masonry	20	1	...	2	...	5	...	121	...	129	...	129
Pottery and earthenware	15	69	...	60	...	55	...	493	...	677	...	677
Stone-dressing	19	1	...	2	...	8	...	234	...	245	...	245
Other works	23	3	...	13	...	21	...	343	...	380	...	380
Total, Class 3	224	211	...	333	1	506	11	4,692	14	5,742	26	5,768
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	1	...	.....	...	.....	...	.....	3	.....	3	.....	3
Boxes and packing-cases	54	24	.....	53	.....	66	.. ...	496	.....	639	.....	639
Cooperage..	11	8	.....	15	.....	20	.....	210	.....	253	... ..	253
Joinery	200	64	2	236	.....	229	.. ...	1,896	1	2,425	3	2,428
Saw-milling—Timber	68	32	.....	104	... ..	123	2	1,030	2	1,289	4	1,293
Firewood	54	...	... .	5	.....	...	... .	119	.....	124	.....	124
Wood-turning	19	6	.....	5	.....	14	.....	63	.....	88	.....	88
Other works	40	9	... ..	24	1	31	1	203	1	267	3	270
Total, Class 4	447	143	2	442	1	483	3	4,020	4	5,088	10	5,098
CLASS 5.—METAL WORKS, MACHINERY, &c.												
Agricultural implements	10	4	.....	13	... .	22	.. ...	108	.....	147	.....	147
Brass and copper	62	22	.....	93	4	97	4	546	1	758	9	767
Cutlery	29	4	.....	18	.....	18	.....	83	.....	123	.....	123
Engineering	283	132	.....	459	3	876	5	5,056	10	6,523	18	6,541
Galvanised iron	39	26	.....	77	.....	77	.....	415	.....	595	.. ...	595
Iron works, foundries, and boiler-making	109	84	.....	148	3	256	5	2,725	14	3,213	22	3,235
Iron safes and doors	4	2	.....	5	.....	8	.....	76	.....	91	.....	91
Lead-mills	2	...	.....	2	.....	1	.....	30	.....	33	.....	33
Railway carriage works	2	1	.....	5	.....	22	.....	135	.....	163	.....	163
Smelting and ore dressing	5	...	.....	7	... ..	10	.....	87	.....	104	.... .	104
Stoves and ovens	20	33	.....	84	3	92	7	702	7	911	17	928
Tinsmithing	19	92	15	127	55	170	93	604	100	993	263	1,256
Wire-working	14	38	.....	103	.. ...	136	.....	506	.....	783	.....	783
Other metal works	94	78	11	134	19	220	12	1,000	2	1,432	44	1,476
Plumbing	19	5	.....	18	.. ...	22	.....	243	.....	288	.....	288
Farriery	27	1	.....	2	.....	5	.....	73	.....	81	.....	81
Total, Class 5	738	522	26	1,295	87	2,032	126	12,389	134	16,238	373	16,611
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(a) *Animal Food.*												
Bacon	9	...	.. ...	2	.....	6	.....	125	.....	133	.....	133
Butchers' small goods	406	5	.....	23	.... .	42	.. ...	605	6	675	6	681
Margarine	2	3	.....	5	.....	20	.....	98	.....	126	.....	126
Meat-preserving	7	...	.....	...	.....	2	4	43	10	45	14	59
Total	424	8	.. ...	30	.....	70	4	871	16	979	20	999
(b) *Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.*												
Biscuits	8	207	233	135	211	90	228	271	277	703	949	1,652
Bread and pastry	513	26	6	169	11	178	16	1,486	103	1,859	136	1,995
Confectionery	169	62	102	88	282	103	354	532	265	785	1,003	1,788
Corn-flour and oatmeal	9	1	10	2	9	3	22	91	36	97	77	174
Flour-milling	18	...	.. ...	10	.....	21	.....	288	.. ...	319	... ..	319
Jam and fruit preserving	22	3	9	17	28	52	31	221	198	293	266	559
Pickles, sauces, and vinegar	9	1	5	6	6	24	26	59	62	90	99	189
Poultry foods and dog biscuits	9	2	.. ...	13	.....	7	.....	153	.....	175	.....	175
Self-raising flour	4	...	5	4	5	4	23	10	10	18	43	61
Sugar-refining	2	1	1	1	5	5	1	306	10	313	17	330
Total	763	303	371	445	557	487	701	3,417	961	4,652	2,590	7,242
(c) *Drinks and Stimulants.*												
Aerated waters and cordials	26	10	.....	33	3	49	37	225	21	317	61	378
Brewing	7	...	.. ...	4	.....	26	.....	718	.....	748	.....	748
Condiments, coffee, spices, &c.	41	51	153	28	172	44	267	306	230	429	822	1,251
Distillery	2	...	.....	...	.....	1	.....	48	.....	49	.....	49
Ice and refrigerating	72	2	.....	13	... ..	12	.. ...	446	1	473	1	474
Tea blending and packing	16	29	25	14	38	18	51	75	63	136	177	313
Wine, spirits, and beer bottling	27	5	. ...	29	1	34	7	273	44	341	52	393
Total	191	97	178	121	214	184	362	2,091	359	2,493	1,113	3,606
(d) *Narcotics.*												
Tobacco, cigars, and cigarettes	17	42	137	80	188	115	275	560	613	797	1,213	2,010
Total, Class 6	1,395	450	686	676	959	856	1,342	6,939	1,949	8,921	4,936	13,857

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(a) *Textile.*												
Woollen mills	10	48	93	62	119	57	197	497	517	664	926	1,590
(b) *Dress.*												
Boots and shoes—Order made ...	370	18	1	46	1	57	2	618	11	739	15	754
Factory made ...	102	121	253	196	344	208	340	2,014	953	2,539	1,890	4,429
Clothing—Men's slops	88	35	325	46	436	66	468	537	1,256	684	2,485	3,169
Women's slops	147	9	257	6	374	13	493	80	1,329	108	2,453	2,561
Tailoring	229	16	201	39	310	48	343	825	1,525	928	2,379	3,307
Corsets	9	2	35	3	67	3	115	10	170	18	387	405
Dressmaking and millinery—												
Makers' material	137	7	333	5	469	6	550	19	1,179	37	2,531	2,568
Customers' material	154	...	110	...	141	...	158	4	483	4	892	896
Dye Works	24	2	...	11	6	17	18	116	81	146	105	251
Furriery	15	4	18	14	23	14	23	33	71	65	135	200
Hats and caps	31	26	81	46	109	49	169	313	332	434	691	1,125
Hosiery and knitting	67	21	183	52	439	73	602	209	635	355	1,859	2,214
Oilskin and waterproof clothing ...	11	...	2	...	1	...	8	11	18	11	29	40
Shirts, ties, and scarves	53	11	259	23	343	34	358	89	719	157	1,679	1,836
Umbrellas	6	1	6	4	15	2	28	22	36	29	85	114
Underclothing	90	5	152	7	176	3	207	38	491	53	1,026	1,079
Wigs and hair work	10	..	3	...	15	...	19	3	22	3	59	62
Total	1,543	278	2,219	498	3,269	593	3,901	4,941	9,311	6,310	18,700	25,010
(c) *Fibrous Materials and Textiles not elsewhere included.*												
Bags and sacks	9	17	42	20	49	17	96	73	97	127	284	411
Rope and twine...	10	18	12	54	15	46	10	74	5	192	42	234
Tents and tarpaulins	10	5	7	7	9	6	10	34	70	52	96	148
Total	29	40	61	81	73	69	116	181	172	371	422	793
Total, Class 7 ...	1,582	366	2,373	641	3,461	719	4,214	5,619	10,000	7,345	20,048	27,393
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	18	9	...	12	4	13	3	77	16	111	23	134
Electrotyping and stereotyping, type founding, and printers' materials	21	14	17	17	10	19	9	92	6	142	42	184
Paper bags and boxes	14	36	141	55	188	53	262	196	253	340	844	1,184
Paper mills, cardboard, and straw-board	5	14	14	17	23	26	36	270	47	327	120	447
Photo-engraving, photo-lithography, and photo. materials	47	9	35	23	52	31	85	151	205	214	377	591
Printing, bookbinding, and manufacturing stationery	305	247	235	425	338	465	397	3,309	712	4,386	1,682	6,068
Total, Class 8 ...	410	329	442	549	615	547	792	4,095	1,239	5,520	3,088	8,608
CLASS 9.—MUSICAL INSTRUMENTS, &c												
Pianos, organs, and sewing-machines	29	28	2	57	7	74	28	470	20	629	57	686
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	5	3	.....	1	2	4	.. ...	21	1	29	3	32
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY HARNESS, &c.												
Coaches and waggons	82	22	1	85	1	104	3	628	1	839	6	845
Cycles and motor cars	317	110	2	291	6	354	12	2,403	31	3,158	51	3,209
Perambulators, &c.	8	15	.....	14	2	28	2	115	.....	172	4	176
Saddlery, harness, &c.	33	9	2	17	4	16	8	198	16	240	30	270
Naves, spokes, &c.	2	2	.....	2	.....	24	.....	57	.....	85	.....	85
Whips	3	...	.....	4	.....	1	.....	12	.....	17	.....	17
Total, Class 11 ...	445	158	5	413	13	527	25	3,413	48	4,511	91	4,602
CLASS 12.—SHIPBUILDING FITTINGS, &c.												
Docks and slips	3	...	.....	15	.....	84	.....	929	.....	1,028	.....	1,028
Sailmaking	6	...	2	...	2	1	5	30	28	31	37	68
Ship and boat building	26	...	.....	22	.....	61	.....	581	.....	664	.....	664
Total, Class 12 ..	35	...	2	37	2	146	5	1,540	28	1,723	37	1,760

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females	Total
CLASS 13.—FURNITURE, BEDDING, &c.												
Bedding, floek, and upholstery ...	45	43	27	54	54	108	52	416	234	621	377	998
Carpet-sewing	3	...	3	1	5	1	11	12	33	14	52	66
Iron bedsteads	5	17	.....	18	.....	26	2	191	.....	252	2	254
Billiard tables	1	1	1	12	8	7	2	76	5	96	16	112
Chair-making	16	10	.....	28	.....	40	.....	160	.....	238	.....	238
Furniture and cabinet making—												
European	197	78	.....	326	.....	366	1	1,716	2	2,486	3	2,489
Chinese	35	...	.....	...	.....	1	.....	236	.....	237	.....	237
Bamboo and wicker	9	3	.....	6	.....	7	.....	67	2	83	2	85
Picture frames	26	7	1	10	5	7	12	78	31	102	49	151
Window blinds	7	8	7	4	4	10	2	49	17	71	30	101
Total, Class 13 ..	344	167	49	459	76	573	82	3,001	324	4,200	531	4,731
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c. ..	17	11	38	13	72	10	70	57	50	91	230	321
Chemieal works and drugs	60	33	50	40	103	51	156	327	206	451	515	966
Fertilisers	6	...	.....	...	.....	1	.....	49	.....	50	.....	50
Perfumes and essences	20	4	15	15	34	17	45	43	27	79	121	200
Paints and varnishes	19	47	6	39	3	52	10	384	28	522	47	569
Other minor works	3	...	.....	2	3	3	2	10	3	15	8	23
Total, Class 14 ..	125	95	109	109	215	134	283	870	314	1,208	921	2,129
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	25	2	6	8	15	18	4	66	13	94	38	132
Surgical instruments	5	1	2	3	.....	3	2	30	6	37	10	47
Other minor works	3	...	.....	2	.....	1	... ..	5	.....	8	.....	8
Total, Class 15 ..	33	3	8	13	15	22	6	101	19	139	48	187
CLASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.												
Electroplating	27	17	3	34	11	30	4	161	3	242	21	263
Jewellery	75	5	10	27	13	60	18	353	38	445	79	524
Total, Class 16 ...	102	22	13	61	24	90	22	514	41	687	109	787
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrieal apparatus	82	51	13	166	18	272	20	550	36	1,039	87	1,126
Electrie light and power works* ...	80	...	.....	19	.....	40	.....	631	.. ...	690	.. ...	690
Gas works	8	5	.....	9	.....	11	.....	1,010	.....	1,035	.....	1,035
Lamps and gas mantles	7	4	2	6	9	6	44	48	40	64	95	159
Hydraulie power	2	...	.....	1	.....	1	.....	18	.....	20	.....	20
Coke works	3	2	.....	3	.....	2	.....	84	.....	90	.....	90
Total, Class 17 ...	182	62	15	204	27	332	64	2,340	76	2,938	182	3,120
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Faney leather	26	9	33	15	48	17	47	114	54	155	182	337
Leather belting	5	6	.....	4	.....	8	.....	39	.....	57	.....	57
Portmanteaux	9	40	.....	33	7	55	14	182	48	310	69	379
Other minor works	23	24	23	20	30	20	30	95	40	159	123	282
Total, Class 18 ...	63	79	56	72	85	100	91	430	142	681	374	1,055
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting .	6	3	.....	1	1	8	1	96	13	108	15	123
Brooms, brushes	24	19	13	22	18	42	19	147	38	230	88	318
Florists and seedsmen	7	1	9	1	10	1	11	18	5	21	35	56
Laundries—European†	130	2	55	5	135	16	210	206	963	229	1,443	1,672
Chinese	21	...	.....	...	.....	...	.....	22	.....	22	.....	22
Rubber goods	9	34	9	36	33	53	92	489	272	612	406	1,018
Toys	28	13	16	18	28	14	15	49	11	94	70	164
Painting and sign-writing	10	3	3	11	1	19	2	202	1	235	7	242
Other minor works	24	...	15	21	31	23	47	122	48	166	141	307
Total, Class 19 ...	259	75	120	115	257	176	477	1,351	1,351	1,717	2,205	3,922
Total, All Industries ...	6,573	2,825	3,951	5,585	5,925	7,513	7,615	54,099	15,813	70,022	33,334	103,356

* These figures include 68 electrie lighting plants for picture shows, employing 61 persons.
† Charitable institutions doing outside laundry work are now included in the number of factories registered.

Appendix V.

Persons employed, by Class of Factory—1919-23.

Class of Factory.	1919.	1920.	1921.	1922.	1923.
Metropolitan District.					
I. Treating raw material, product of pastoral pursuits	2,613	2,502	2,185	2,390	2,246
II. Oils and fats—animal, vegetable, &c.	835	735	849	862	764
III. Processes relating to stone, clay, glass, &c.	5,250	6,724	5,210	5,500	5,768
IV. Working in wood	4,296	4,567	4,259	4,819	5,098
V. Metal works, machinery, &c.	11,818	14,856	14,185	14,684	16,611
VI. Connected with food and drink, &c.	14,915	14,397	13,775	14,437	13,857
VII. Clothing and textile fabrics, &c.	24,994	25,600	26,145	28,585	27,393
VIII. Books, paper, printing, engraving, &c.	6,840	7,252	7,444	8,001	8,608
IX. Musical instruments, &c.	496	563	472	638	686
X. Arms and explosives	33	30	17	22	32
XI. Vehicles and fittings, saddlery, harness, &c.	2,740	3,540	3,371	4,051	4,602
XII. Ship and boat building, &c.	2,180	2,968	1,869	1,150	1,760
XIII. Furniture, bedding, &c.	4,193	4,439	3,924	4,498	4,731
XIV. Drugs, chemicals, and by-products	2,013	2,173	2,085	2,267	2,129
XV. Surgical and other scientific instruments	143	146	155	184	187
XVI. Jewellery and plated-ware, &c.	837	975	861	891	787
XVII. Heat, light, and power	3,284	3,497	3,279	2,557	3,120
XVIII. Leatherware (excepting saddlery and harness)	1,238	1,079	1,147	1,249	1,055
XIX. Minor wares, n.e.i.	3,621	3,810	3,927	3,965	3,922
Total	92,339	99,853	95,159	100,690	103,356
Newcastle District.					
I. Treating raw material, product of pastoral pursuits	113	133	177	131	165
II. Oils and fats—animal, vegetable, &c.	203	175	219	195	176
III. Processes relating to stone, clay, glass, &c.	355	507	431	382	415
IV. Working in wood	1,364	1,424	1,396	1,347	1,525
V. Metal works, machinery, &c.	5,049	6,089	6,587	2,490	5,738
VI. Connected with food and drink, &c.	1,274	1,221	1,283	1,273	1,294
VII. Clothing and textile fabrics, &c.	1,085	1,209	1,269	1,366	1,203
VIII. Books, paper, printing, engraving, &c.	253	272	280	260	324
IX. Musical instruments, &c.	7	8	7	8	7
XI. Vehicles and fittings, saddlery, harness, &c.	289	377	354	392	404
XII. Ship and boat building, &c.	61	99	101	55	62
XIII. Furniture, bedding, &c.	181	205	218	209	223
XIV. Drugs, chemicals, and by-products	48	42	43	80	88
XV. Surgical and other scientific instruments	1	...	5	5	6
XVI. Jewellery and plated-ware, &c.	21	23	30	16	16
XVII. Heat, light and power	535	570	774	263	795
XIX. Minor wares, n.e.i.	159	157	130	99	128
Total	10,998	12,511	13,304	8,571	12,569
Rest of State.					
I. Treating raw material, product of pastoral pursuits	420	339	371	381	496
II. Oils and fats—animal, vegetable, &c.	18	19	26	22	30
III. Processes relating to stone, clay, glass, &c.	1,358	1,473	1,494	1,329	1,795
IV. Working in wood	1,946	2,216	2,238	2,261	2,659
V. Metal work, machinery, &c.	2,034	2,526	2,080	2,150	2,648
VI. Connected with food and drink, &c.	3,313	2,713	3,010	3,024	3,021
VII. Clothing and textile fabrics, &c.	1,510	1,408	1,467	1,495	1,553
VIII. Books, paper, printing, engraving, &c.	622	650	703	681	738
XI. Vehicles and fittings, saddlery, harness, &c.	1,461	1,590	1,547	1,459	1,505
XII. Ship and boat building, &c.	11	.....	.....	.....	.....
XIII. Furniture, bedding, &c.	89	120	126	124	156
XIV. Drugs, chemicals, and by-products	16	3	28	46	80
XV. Surgical and other scientific instruments	.....	1	3	2	2
XVI. Jewellery and plated-ware, &c.	9	4	13	12	13
XVII. Heat, light and power	630	677	700	718	781
XIX. Minor wares, n.e.i.	131	142	115	132	159
Total	13,568	13,681	13,921	13,816	15,636
State.					
I. Treating raw material, product of pastoral pursuits	3,146	2,974	2,733	2,902	2,907
II. Oils and fats—animal, vegetable, &c.	1,056	929	1,094	1,079	970
III. Processes relating to stone, clay, glass, &c.	6,963	8,704	7,135	7,211	7,978
IV. Working in wood	7,606	8,207	7,893	8,427	9,282
V. Metal work, machinery, &c.	18,901	23,471	22,852	19,324	24,997
VI. Connected with food and drink, &c.	19,502	18,331	18,063	18,734	18,172
VII. Clothing and textile fabrics, &c.	27,589	28,217	28,881	31,446	30,149
VIII. Books, paper, printing, engraving, &c.	7,715	8,174	8,427	8,942	9,670
IX. Musical instruments, &c.	503	571	579	646	693
X. Arms and explosives	33	30	17	22	32
XI. Vehicles and fittings, saddlery harness, &c.	4,490	5,307	5,272	5,881	6,511
XII. Ship and boat building, &c.	2,252	3,067	1,970	1,205	1,822
XIII. Furniture, bedding, &c.	4,463	4,764	4,268	4,831	5,110
XIV. Drugs, chemicals, and by-products	2,077	2,218	2,156	2,333	2,297
XV. Surgical and other scientific instruments	144	147	163	191	195
XVI. Jewellery and plated-ware, &c.	867	1,002	904	919	816
XVII. Heat, light, and power	4,449	4,744	4,733	3,539	4,696
XVIII. Leatherware (excepting saddlery and harness)	1,238	1,079	1,147	1,249	1,055
XIX. Minor wares, n.e.i.	3,911	4,109	4,172	4,196	4,209
Total	116,905	126,045	122,384	123,077	131,561

Appendix VI.

Persons employed, by Age Groups—1919-1923.

Metropolitan District.

Year.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		Over 21 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1919	5,330	2,383	3,159	4,609	4,818	5,649	6,737	49,389	15,595	62,030	30,309	92,339
1920	5,842	2,456	3,392	5,201	5,086	6,459	6,948	54,467	15,844	68,583	31,270	99,853
1921	5,934	2,449	3,425	5,341	5,561	6,210	6,934	49,850	15,389	63,850	31,309	95,159
1922	6,367	2,574	3,859	5,456	5,924	7,244	7,542	51,614	16,477	66,838	33,802	100,690
1923	6,573	2,825	3,951	5,585	5,925	7,513	7,645	54,099	15,813	70,022	33,334	103,356

Newcastle District.

1919	866	259	152	630	250	569	309	8,400	429	9,858	1,140	10,998
1920	936	302	174	732	315	652	337	9,548	451	11,234	1,277	12,511
1921	1,017	194	170	734	323	754	351	10,307	471	11,989	1,315	13,304
1922	1,100	161	181	620	384	730	377	5,671	447	7,182	1,389	8,571
1923	1,171	201	143	800	287	921	342	9,427	448	11,349	1,220	12,569

Rest of State.

1919	2,807	307	72	686	200	955	217	10,638	493	12,586	982	13,568
1920	2,967	282	70	660	187	844	211	10,963	464	12,749	932	13,681
1921	3,136	260	70	748	170	861	239	11,111	462	12,980	941	13,921
1922	3,207	257	95	815	217	879	214	10,914	425	12,865	951	13,816
1923	3,314	253	116	957	262	1,040	225	12,305	478	14,555	1,081	15,636

State.

1919	9,003	2,949	3,383	5,925	5,268	7,173	7,263	68,427	16,517	84,474	32,431	116,905
1920	9,745	3,040	3,636	6,593	5,588	7,955	7,496	74,978	16,759	92,566	33,479	126,045
1921	10,087	2,903	3,665	6,823	6,054	7,825	7,524	71,268	16,322	88,819	33,565	122,384
1922	10,674	2,992	4,135	6,891	6,525	8,853	8,133	68,199	17,349	86,935	36,142	123,077
1923	11,058	3,279	4,210	7,342	6,474	9,474	8,212	75,831	16,739	95,926	35,635	131,561

Appendix VII.

Horse-power of Machinery, by Class of Factory and Method of Production, Classified by Industry, 1923.

METROPOLITAN DISTRICT.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 1.—TREATING RAW MATERIALS, &c.									
Boiling-down and tallow refining	6	145	130	1	120	60	4	190	145
Glue	1	802	352	...	.....	.....	1	545	412
Tanning	22	493	320	12	391	288	44	1,830	1,524
Woolscouring and fellmongering and packing skins..	12	1,998	1,262	2	22	16	19	2,542	996
Chaff-cutting	...	...	...	3	24	20	26	608	534
Total	41	3,438	2,064	18	557	384	94	5,715	3,611
CLASS 2.—OILS AND FATS.									
Oil and grease	4	212	186	1	11	10	3	145	139
Soap and candles	4	746	303	...	.....	.....	7	1,452	1,180
Total	8	958	489	1	11	10	10	1,597	1,319
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.									
Asphalt	...	.....	.....	...	.....	.....	5	46	43
Bricks and tiles	35	5,086	3,207	13	951	716	33	4,109	3,298
Glass and glass bottles	1	500	400	...	.....	.....	8	890	726
Glass (ornamental)	1	9	5	1	5	4	20	301	225
Cement	...	.....	.....	...	... ..	... ..	4	361	203
Marble and slate	...	.....	.....	2	40	22	6	417	315
Modelling and fibrous plaster	...	.....	.....	...	.....	.....	14	118	116
Monumental masons	1	8	7	...	.....	.....	4	117	106
Pottery and earthenware	5	475	302	3	56	47	8	511	402
Stone-dressing	6	161	141	1	26	.....	13	634	520
Other works	1	40	30	2	364	150	13	841	670
Total	50	6,279	4,092	22	1,442	939	128	8,345	6,624
CLASS 4.—WORKING IN WOOD.									
Incubators..	...	.....	.....	...	.....	.....	1	2	2
Boxes and packing-cases	3	762	563	1	3	2	46	887	777
Cooperage	...	.....	.....	...	.....	.....	10	273	252
Joinery	7	457	327	29	363	263	156	2,654	2,164
Saw-milling—timber	25	3,977	3,240	4	74	28	39	3,773	3,077
firewood	30	391	294	1	25	25	10	177	172
Wood-turning	...	.....	.....	5	28	23	12	131	90
Other works	...	.....	.....	1	4	3	33	757	553
Total	65	5,587	4,424	41	497	344	307	8,654	7,087
CLASS 5.—METAL WORKS, MACHINERY, &c.									
Agricultural implements	...	.....	.....	3	97	68	5	160	124
Brass and copper	1	230	230	1	4	3	51	458	382
Cutlery	...	.....	.....	...	.....	.....	27	283	247
Engineering	16	2,298	1,487	22	622	396	234	7,867	4,895
Galvanised iron	1	8	6	1	7	7	31	405	336
Iron works, foundries, and boiler-making	6	600	372	13	112	87	89	3,788	3,032
Iron safes and doors	...	.....	.....	...	.....	.....	4	73	53
Lead-mills	1	275	200	...	.....	.....	7	79	44
Railway carriage works	1	140	.....	...	.....	.....	1	68	65
Smelting and ore-dressing	1	32	24	...	.....	.....	4	620	175
Stoves and ovens	...	.....	.....	1	25	15	16	944	846
Tinsmithing	...	.....	.. ...	2	110	62	13	482	401
Wire-working	...	.....	.....	...	.....	.....	12	2,063	2,029
Other metal works	...	.....	.....	5	358	204	70	1,281	961
Plumbing	...	.....	.....	1	3	1	10	32	31
Farriery	...	.....	.....	1	4	3	16	23	20
Total	27	3,583	2,319	50	1,342	846	590	18,626	13,641
CLASS 6.—CONNECTED WITH FOOD AND DRINK, &c.									
Bacon	4	237	222	...	.....	.....	8	206	201
Butchers' small-goods	6	70	59	30	170	130	342	1,849	1,666
Margarine	2	47	18	1	52	35	2	327	147
Meat-preserving	1	56	31	...	... ..	.....	4	230	191
Biscuits	2	50	20	1	15	.....	7	1,188	619
Bread and pastry	10	101	61	14	89	69	172	1,074	913
Confectionery	5	188	132	1	5	5	85	2,037	1,750
Corn-flour and oatmeal	1	13	12	...	.. ...	.....	6	835	562
Flour-milling	2	1,030	860	1	20	15	16	2,281	1,780
Jam and fruit preserving	4	48	38	...	.....	.....	14	396	359
Pickles, sauces, and vinegar	2	42	26	1	26	5	4	179	127
Dog biscuits and poultry foods	1	150	140	...	.....	.....	9	722	630
Self-raising flour	...	.....	.....	1	3	3	4	66	57
Sugar refining	1	179	179	...	.....	.....	2	2,611	2,611
Aerated waters	2	13	13	5	24	14	18	466	438
Brewing	4	3,406	1,959	1	15	10	3	2,363	1,586
Condiments, Eastern goods, &c.	5	1,436	884	5	106	106	23	528	467
Distillery	...	...	.....	...	.....	.....	1	229	229
Ice and refrigerating	14	4,727	3,177	21	1,366	1,210	55	2,712	2,211
Tea-blending	1	7	2	..	.....	.....	15	224	207
Wines and spirits	1	43	7	1	14	14	11	77	66
Tobacco, cigars, &c.	3	1,188	590	..	.....	.....	7	693	245
Total	71	13,031	8,430	83	1,905	1,616	808	21,263	17,062

Appendix VII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, &c.									
Woollen mills	6	663	615	1	200	180	8	2,937	2,333
Boots and shoes—order and repairing	...	.....	.....	9	24	20	335	440	401
factory made	1	250	100	4	167	160	94	1,343	1,242
Clothing—men's slops	...	.....	.....	...	.....	.....	68	504	494
women's slops	...	.....	.....	1	4	4	115	265	238
tailoring	...	.....	.....	...	.....	.....	72	101	92
Corsets	...	.....	.....	...	.....	.....	5	110	60
Dressmaking—makers' materials	...	.....	.....	2	10	12	48	99	93
customers' materials	...	.....	.....	...	.....	.....	31	25	25
Dye works	3	40	28	...	.....	.....	18	210	157
Furriery	...	.....	.....	1	4	4	6	14	14
Hats and caps	3	229	119	...	.....	.....	30	560	468
Hosiery, knitting, &c.	1	10	10	1	2	.....	53	880	705
Oilskins and waterproof clothing	2	9	8	...	.....	.....	6	21	18
Shirts, ties, and scarfs	...	.....	.....	1	18	18	53	283	258
Umbrellas	...	.....	.....	...	.....	.....	6	14	12
Underclothing	...	.....	.....	1	3	1	72	180	160
Wigs and hairwork	...	.....	.....	...	.....	.....	...	.....	.....
Bags and sacks	...	.....	.....	...	.....	.....	7	306	259
Rope and twine	1	125	80	1	401	225	7	294	243
Tents and tarpaulins	...	.....	.....	...	.....	.....	10	34	26
Total	17	1,326	960	22	833	624	1,044	8,608	7,286
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.									
Die-sinking and engraving	...	.....	.....	...	.....	.....	15	65	51
Electro- and stereo-typing, printers' materials, &c.	...	.....	.....	1	6	3	15	248	203
Paper bags and boxes	1	25	25	1	20	14	12	327	277
Paper-mills	2	1,702	1,397	1	73	.....	2	1,823	1,350
Photo.-engraving, photo. materials, &c.	...	.....	.....	...	.....	.....	11	61	55
Printing, bookbinding, and stationery	2	156	106	38	494	358	267	7,011	5,180
Total	5	1,883	1,528	41	593	375	322	9,535	7,116
CLASS 9.—MUSICAL INSTRUMENTS, &c.									
Pianos and sewing-machines	...	.....	.....	...	.....	.....	18	739	722
CLASS 10.—ARMS AND EXPLOSIVES.									
Explosives	...	.....	.....	...	.....	.....	4	35	29
CLASS 11.—VEHICLES, SADDLERY, HARNESS, &c.									
Coaches and waggons	4	50	35	5	46	30	46	426	348
Cycles and motor-cars	2	9	5	20	83	56	256	1,708	1,470
Perambulators	...	.....	.....	...	.....	.....	6	43	33
Saddlery and harness	...	.....	.....	...	.....	.....	19	86	83
Naves and spokes	1	85	85	...	.....	.....	2	219	169
Whips	1	30	10	...	.....	.....	...	.....	.....
Total	8	174	135	25	129	86	329	2,482	2,103
CLASS 12.—SHIPBUILDING, &c.									
Docks and slips	3	2,010	2,010	...	.....	.....	2	749	707
Sailmaking	...	.....	.....	...	.....	.....	4	11	11
Ship and boat building	5	333	148	2	25	24	22	496	390
Total	8	2,343	2,158	2	25	24	28	1,256	1,108
CLASS 13.—FURNITURE, BEDDING, &c.									
Bedding and flock	3	78	54	1	3	2	38	701	647
Carpet-sewing	...	.....	.....	...	.....	.....	3	28	19
Iron bedsteads	...	.....	.....	...	.....	.....	5	421	421
Billiard-tables	...	.....	.....	...	.....	.....	1	116	75
Chair-making	1	50	45	1	4	4	15	219	202
Furniture—European	1	1	1	9	39	33	154	2,587	2,217
Chinese	...	.....	.....	1	25	24	13	111	99
Bamboo and Wicker	...	.....	.....	...	.....	.....	...	.....	.....
Picture frames	...	.....	.....	...	.....	.....	26	49	48
Window blinds	...	.....	.....	...	.....	.....	5	24	14
Total	5	129	100	12	71	63	260	4,256	3,742
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.									
Blue, baking-powder, soda, &c.	2	22	22	1	22	.....	13	508	438
Chemical works and drugs	5	101	60	...	.....	.....	42	1,084	888
Fertilisers	2	85	57	...	.....	.....	3	153	110
Perfumes and essences	...	.....	.....	...	.....	.....	14	143	111
Paints and varnishes	2	27	25	1	60	35	18	1,783	974
Other minor works	2	127	1	...	.....	.....	2	150	111
Total	13	362	165	2	82	35	92	3,821	2,632
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.									
Optical instruments	...	.....	.....	...	.....	.....	26	73	64
Surgical instruments	...	.....	.....	...	.....	.....	5	9	8
Other minor works	...	.....	.....	...	.....	.....	3	4	4
Total	...	.....	.....	...	.....	.....	34	86	76
CLASS 16.—TIME-PIECES, JEWELLERY AND PLATED WARE.									
Electro-plating	...	.....	.....	1	26	16	29	268	238
Jewellery	...	.....	.....	1	4	.....	61	206	192
Total	...	.....	.....	2	30	16	90	474	430

Appendix VII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 17.—LIGHT, HEAT, AND POWER.									
lectrical apparatus	...	.....	.....	...	.....	.....	75	570	987
Electric light and power works*	3	69,398	50,090	41	1,648	1,037	54	2,846	1,401
Gas	4	3,276	1,557	4	729	431	7	2,309	806
Lamps and gas mantles	...	.....	.....	...	.....	.....	5	105	79
Hydraulic power	2	1,795	542	...	.....	.....	1	25	20
Coke works	1	90	75	...	.....	.....	2	659	541
Total	10	74,559	52,664	45	2,377	1,468	144	6,514	3,334
CLASS 18.—LEATHERWARE (EXCEPTING SADDLERY AND HARNESS).									
Fancy leather	...	.....	.....	...	.....	.....	16	197	156
Leather belting	...	.....	.....	...	.....	.....	5	51	50
Portmanteaux and bags	...	.....	.....	1	16	8	8	72	58
Other minor works	...	.....	.....	...	.....	.....	21	70	63
Total	...	.....	.....	1	16	8	50	390	327
CLASS 19.—MINOR WARES (NOT ELSEWHERE INCLUDED).									
Baskets, &c.	...	.....	.....	...	.....	.....	1	5	3
Brooms and brushes	1	12	12	2	20	8	23	147	130
Florists and seedsmen	...	.....	.....	...	.....	.....	4	70	27
Laundries—European	18	231	135	10	64	46	97	997	891
,, Chinese	...	.....	.....	...	.....	.....	...	.....	.....
Rubber goods	1	789	612	...	.....	.....	8	790	674
Toys	...	.....	.....	5	20	14	16	72	61
Painting and signwriting	...	.....	.....	...	.....	.....	3	6	4
Other minor works	...	.....	.....	...	.....	.....	13	85	66
Total	20	1,032	759	17	104	68	165	2,172	1,852
Total, All Classes	348	114,684	80,287	384	10,014	6,906	4,517	104,568	80,105

*NOTE.—These figures include 33 gas plants using 497 h.-p., and 29 electric and oil plants using 396 h.-p., for lighting purposes at Picture Shows.

Appendix VIII.

Horse-power of Machinery used and Method of Production, by Class of Factory, 1923.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
METROPOLITAN DISTRICT.									
I. Treating raw materials, product of pastoral pursuits	41	3,438	2,064	18	557	384	94	5,715	3,611
II. Oils and fats—animal, vegetable, &c.	8	958	489	1	11	10	10	1,597	1,319
III. Processes in stone, clay, glass, &c.	50	6,279	4,092	22	1,442	939	128	8,345	6,624
IV. Working in wood	65	5,587	4,424	41	497	344	307	8,654	7,087
V. Metal works, machinery, &c.	27	3,583	2,319	50	1,342	846	590	18,626	13,641
VI. Connected with food and drink, &c.	71	13,031	8,430	83	1,905	1,616	808	21,263	17,062
VII. Clothing and textile fabrics, &c.	17	1,326	960	22	833	624	1,044	8,608	7,286
VIII. Books, paper, printing, and engraving, &c.	5	1,883	1,528	41	593	375	322	9,535	7,116
IX. Musical instruments, &c.	...	...	...	...	...	...	18	739	722
X. Arms and explosives	...	...	...	...	...	...	4	35	29
XI. Vehicles and fittings, saddlery and harness, &c.	8	174	135	25	129	86	329	2,482	2,103
XII. Ship and boat building, &c.	8	2,343	2,158	2	25	24	28	1,256	1,108
XIII. Furniture, bedding, &c.	5	129	100	12	71	63	260	4,256	3,742
XIV. Drugs, chemicals, and by-products	13	362	165	2	82	35	92	3,821	2,632
XV. Surgical and other scientific instruments	...	...	...	...	...	...	34	86	76
XVI. Jewellery and plated-ware, &c.	...	...	...	2	30	16	90	474	430
XVII. Heat, light, and power	10	74,559	52,664	45	2,377	1,468	144	6,514	3,334
XVIII. Leatherware, n.e.i.	...	...	...	1	16	8	50	390	327
XIX. Minor wares, n.e.i.	20	1,032	759	17	104	68	165	2,172	1,856
Total	348	114,684	80,287	384	10,014	6,906	4,517	104,568	80,105
NEWCASTLE DISTRICT.									
I. Treating raw materials, product of pastoral pursuits	2	220	220	...	...	...	10	512	393
II. Oils and fats—animal, vegetable, &c.	3	267	129	...	...	...	1	81	40
III. Processes in stone, clay, glass, &c.	18	983	553	1	60	50	11	507	138
IV. Working in wood	116	4,660	2,679	11	147	118	47	807	667
V. Metal works, machinery, &c.	10	50,143	28,970	11	123	88	40	15,261	5,946
VI. Connected with food and drink, &c.	35	2,728	1,650	45	817	555	152	1,676	1,345
VII. Clothing and textile fabrics, &c.	2	20	11	2	11	11	42	155	126
VIII. Books, paper, printing and engraving, &c.	...	...	...	11	160	126	25	189	164
XI. Vehicles and fittings, saddlery and harness, &c.	6	155	147	8	40	40	43	180	149
XII. Ship and boat building, &c.	4	62	51	2	7	5	2	6	4
XIII. Furniture, bedding, &c.	1	8	4	9	94	61	9	113	53
XIV. Drugs, chemicals, &c.	1	25	15	...	...	...	2	29	21
XV. Surgical and other scientific instruments	...	...	...	...	...	...	1	2	2
XVI. Jewellery and plated-ware, &c.	...	...	...	..	...	...	2	8	7
XVII. Heat, light, and power	8	5,655	2,922	20	796	543	33	1,093	647
XIX. Minor wares, n.e.i.	4	58	41	1	28	14	5	43	41
Total	210	64,324	37,395	121	2,283	1,611	425	20,602	9,783

Appendix VIII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
REST OF STATE.									
I. Treating raw materials, products of pastoral pursuits	62	1,044	661	8	266	197	25	248	193
II. Oils and fats—animal, vegetable, &c.	5	53	36	...	...	...	1	5	5
III. Processes in stone, clay, glass, &c.	35	8,852	6,041	5	671	630	36	491	325
IV. Working in wood	331	7,932	5,804	37	663	487	103	1,110	852
V. Metal works, machinery, &c.	12	5,221	4,757	24	235	166	51	7,704	5,113
VI. Connected with food and drink, &c.	143	9,232	5,915	177	4,501	3,033	382	3,780	2,493
VII. Clothing and textile fabrics, &c.	4	150	145	12	71	64	53	142	115
VIII. Books, paper, printing, engraving, &c.	3	32	25	42	276	185	107	413	324
XI. Vehicles and fittings, saddlery and harness, &c.	6	106	77	87	644	462	234	947	820
XIII. Furniture, bedding, &c.	3	51	34	8	62	53	21	128	91
XIV. Drugs, chemicals, &c.	2	38	16	1	6	5	3	498	375
XV. Surgical and other scientific instruments, &c.	...	...	...	...	...	...	1	1	1
XVI. Jewellery and plated-ware, &c.	...	...	...	1	4	3	1	2	1
XVII. Heat, light, and power	35	7,024	3,888	80	3,950	3,054	101	1,754	1,354
XIX. Minor wares, n.e.i.	10	126	120	4	66	60	8	48	46
Total	651	39,861	27,519	486	11,415	8,399	1,127	17,271	12,108
STATE.									
I. Treating raw materials, product of pastoral pursuits	105	4,702	2,945	26	823	581	129	6,475	4,197
II. Oils and fats—animal, vegetable, &c.	16	1,278	654	1	11	10	12	1,683	1,364
III. Processes in stone, clay, glass, &c.	103	16,114	10,686	28	2,173	1,619	175	9,543	7,087
IV. Working in wood	512	17,519	12,907	89	1,307	949	457	10,571	8,606
V. Metal works, machinery, &c.	49	58,947	36,046	85	1,700	1,100	681	41,531	24,700
VI. Connected with food and drink, &c.	249	24,991	15,995	305	7,223	5,204	1,342	26,719	20,900
VII. Clothing and textile fabrics, &c.	23	1,496	1,119	36	915	699	1,139	8,905	7,527
VIII. Books, paper, printing, and engraving, &c.	8	1,915	1,553	94	1,029	686	454	10,137	7,604
IX. Musical instruments, &c.	...	...	...	..	...	...	18	739	722
X. Arms and explosives, &c.	...	...	...	...	..	...	4	35	29
XI. Vehicles and fittings, saddlery and harness, &c.	20	435	359	120	813	588	606	3,609	3,072
XII. Ship and boat building, &c.	12	2,405	2,209	4	32	29	30	1,262	1,112
XIII. Furniture, bedding, &c.	9	188	138	29	227	177	290	4,497	3,926
XIV. Drugs, chemicals, and by-products	16	425	196	3	88	40	97	4,348	3,028
XV. Surgical and other scientific instruments	...	..	...	...	...	...	36	89	79
XVI. Jewellery and plated-ware, &c.	...	...	..	3	34	19	93	484	438
XVII. Heat, light, and power	53	87,238	59,474	145	7,123	5,065	278	9,361	5,335
XVIII. Leatherware, n.e.i.	...	...	..	1	16	8	50	390	327
XIX. Minor wares, n.e.i.	34	1,216	920	22	198	142	178	2,263	1,943
Total	1,209	218,869	145,201	991	23,712	16,916	6,069	142,441	101,996

Appendix IX.

Horse-power of Machinery used and Method of Production—1919–1923.

Year.	Steam.		Gas.		Electricity and other.		Total.	
	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	*No. of Factories.	Horse-power.
METROPOLITAN DISTRICT.								
1919	399	70,286	538	9,920	3,087	51,633	4,024	131,839
1920	421	77,695	494	9,618	3,602	58,155	4,517	145,468
1921	382	80,969	432	8,160	3,920	65,009	4,734	154,138
1922	336	76,174	401	7,306	4,258	71,862	4,995	155,342
1923	348	80,287	384	6,906	4,517	80,105	5,249	167,298
NEWCASTLE DISTRICT.								
1919	211	20,071	103	1,023	261	9,863	575	30,957
1920	235	30,671	113	1,308	290	6,555	638	38,534
1921	229	30,454	117	1,186	334	9,863	680	41,503
1922	204	7,905	119	1,370	391	10,229	714	19,504
1923	210	37,395	121	1,611	425	9,783	756	48,789
REST OF STATE.								
1919	530	25,520	473	7,088	805	10,863	1,808	43,471
1920	582	29,893	462	7,258	857	7,237	1,901	44,388
1921	594	27,507	490	6,966	933	8,456	2,017	42,929
1922	600	27,180	504	7,931	1,032	10,631	2,136	45,742
1923	651	27,519	486	8,399	1,127	12,108	2,264	48,026
STATE.								
1919	1,140	115,877	1,114	18,031	4,153	72,359	6,407	206,267
1920	1,238	138,259	1,069	18,184	4,749	71,947	7,056	228,390
1921	1,205	138,930	1,039	16,312	5,187	83,328	7,431	238,570
1922	1,140	111,259	1,024	16,607	5,681	92,722	7,845	220,588
1923	1,209	145,201	991	16,916	†6,069	†101,996	8,269	264,113

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using power.

† Including 81 factories using oil of 1,012 horse-power (Metropolitan District).
" 133 " " 669 " (Newcastle District).
" 575 " " 2,892 " (Rest of State).
" 789 " " 4,573 " (State).

Appendix X.

Employment of Children.

Certificates of Fitness by class of Factory in Districts, 1923.

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Class 1.—Treating Raw Material—the Products of Pastoral Pursuits.									
Tanneries	27	...	...	...	...	...	...	...	27
Wool scouring	14	3	1	...	...	...	...	...	18
Class 2.—Oils and Fats—Animal and Vegetable.									
Kerosene and oil	39	...	...	...	...	...	...	...	39
Soap, &c.	46	39	10	8	2	...	...	...	105
Class 3.—Processes in Stone, Clay, Glass, &c.									
Glass and bottles	59	...	...	...	...	...	...	...	59
Marble and slate	.....	...	...	...	...	...	...	...	...
Potteries and bricks	239	...	6	...	...	...	1	...	246
Lime and cement	9	...	2	...	...	...	...	...	11
Class 4.—Working in Wood.									
Sawmills and joinery	146	9	15	...	2	...	7	...	179
Class 5.—Metal Works and Machinery, &c.									
Brass and copper	53	3	...	...	...	...	6	...	62
Engineering	182	6	55	...	2	...	8	...	253
Ironworks, stoves, &c.	141	2	68	...	...	...	...	...	211
Smelting and ore works	.....	...	10	...	...	...	21	...	31
Wire works	64	1	5	...	...	...	...	...	70
Class 6.—Connected with Food and Drink, and the Preparation thereof.									
Aerated waters	7	2	1	...	5	1	1	...	17
Biscuits	358	256	6	1	...	...	...	...	621
Bread and pastry	31	6	15	...	4	...	4	...	60
Breweries	.....	...	...	...	...	...	...	...	...
Condiments	4	17	3	2	...	...	...	...	26
Confectionery	137	277	5	6	...	...	...	2	427
Flour mills	.....	...	3	...	...	...	...	...	3
Groceries and packing	61	75	5	4	...	...	...	...	145
Ice and refrigerating	3	...	2	...	...	...	1	...	6
Jam	6	16	...	...	...	...	...	...	22
Meat preserving	22	...	10	...	...	...	4	...	36
Sugar Mills	.....	...	...	...	...	...	...	...	...
Tobacco	39	107	...	...	...	...	...	...	146
Class 7.—Clothing and Textile Fabrics, and Fibrous Materials.									
Artificial flowers	1	16	...	...	...	...	...	...	17
Boots and shoes	106	143	2	...	1	...	12	15	279
Calico bags	10	21	...	...	...	...	...	...	31
Clothing	61	472	2	49	...	...	1	7	592
Corsets	.....	26	...	...	...	...	...	...	26
Dressmaking	3	344	...	24	...	...	...	7	378
Hats and caps	41	166	...	3	...	...	...	...	210
Hosiery and knitting	19	211	...	...	...	...	...	...	230
Rope	30	7	...	...	...	...	...	...	37
Shirts	12	329	...	16	...	...	...	...	357
Tents, &c.	5	10	1	...	...	...	...	...	16
Umbrellas	10	18	...	...	...	...	...	...	28
Whiteworking	3	90	...	21	...	...	...	...	114
Woollen mills	62	91	...	...	...	...	...	7	160
Class 8.—Books, Papers, Printing, Engraving.									
Bookbinding	9	130	...	6	...	...	...	...	145
Paper boxes	54	100	...	3	...	...	...	...	157
Paper mills	16	22	...	...	...	...	...	...	38
Photography	13	25	...	...	...	...	...	...	38
Printing	296	69	15	1	1	...	14	...	396
Type founding	17	21	...	...	...	...	...	...	38
Class 9.—Musical Instruments, &c. Pianos, Organs and Sewing Machines.									
Musical instruments	17	1	...	...	...	...	...	...	18
Class 11.—Vehicles and Fittings, Saddlery, Harness, &c.									
Coachbuilding	20	...	3	...	...	...	3	...	26
Motors and cycles	52	2	2	...	3	...	9	1	69
Class 13.—Furniture, Bedding, &c.									
Bedsteads, bedding	37	10	...	...	...	...	...	...	47
Furniture	114	17	18	...	2	...	...	...	151
Class 14.—Drugs, Chemicals and By-Products.									
Chemicals and Blue	58	83	1	...	...	...	1	2	145
Paints and Varnishes	57	4	...	...	...	...	...	...	61
Class 16.—Timepieces, Jewellery and Plated Ware.									
Jewellery	15	10	3	...	...	...	...	...	28

Appendix X—*continued.*

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Class 17.—Light, Heat, and Power.									
Electric light, &c.	55	12	...	...	...	...	...	...	67
Class 18.—Leatherware, excepting Harness and Saddlery.									
Leather bags, &c.	109	84	...	...	...	...	...	...	193
Class 19.—Minor Wares not elsewhere included.									
Brooms	32	12	3	...	...	...	...	...	47
Cooperage	...	...	1	...	...	...	...	...	1
Laundries	2	47	...	8	...	...	1	3	61
Plumbers and tinsmiths ...	109	5	5	...	...	...	1	...	120
Rubber goods	22	4	1	...	...	...	...	...	27
Toys....	8	14	...	...	...	...	...	...	22
Miscellaneous	55	35	...	...	4	...	...	...	94
Total	3,217	3,470	279	152	26	1	95	44	7,284

Appendix XI.

Accidents by Machinery, 1920–23.

Machines.	1920.	1921.	1922.	1923.
Metal Working Machines—				
Drills	15	21	12	19
Emery wheels	23	33	39	49
Guillotines	3	5	4	5
Lathes	28	24	21	24
Milling	4	3	3	3
Polishing	5	7	4	...
Power presses	35	31	38	42
Rivetting	3	2	2	3
Rolling	5	6	6	10
Screwing	2	1	2	...
Shaping	3	4	3	2
Shears	5	4	7	10
Slotting	2	1	2	...
Steam hammers	6	10	3	3
Wire-working	37	29	47	123
Other tinsmiths' machines	6	3	4	3
Other ironworking machines	10	14	18	18
	192	198	215	314
Woodworking Machines—				
Band saws...	32	7	5	4
Boring	4	8	5	2
Circular moulders ...	25	18	20	21
Circular saws	92	82	95	74
Jointers	38	28	28	35
Lathes	7	4	1	3
Planers	19	12	10	10
Other woodworking machines	11	12	16	15
	208	171	180	164
Printing Machines—				
Cardboard box machines	12	8	...	12
Envelope machines ...	...	3	1	2
Guillotines	9	4	...	1
Platens	7	9	9	11
Printing machines ...	9	10	12	17
Wire-stitching machines	13	4	21	11
Other printing machines	8	8	13	7
	58	46	56	61
Food and Drink Machines—				
Biscuit machines	4	6	4	2
Confectionery machines ...	6	6	5	7
Crown corking machines	...	5	2	...
Dough brakes	8	1	1	8
Mincing	6	3	9	9
Mixing	2	3	2	2
Tobacco	2	4	7	5
Other food and drink machines	11	1	7	9
	39	29	37	42

Machines.	1920.	1921.	1922.	1923.
Stone, clay, &c., Machines—				
Brick presses	3	5	2	5
Pans	2	..	...	...
Tile presses	2	2	1	4
Other stone, &c., machines	1	...	3	1
	8	7	6	10
Leather Working Machines—				
Power presses	14	13	11	5
Rolling	...	3	2	2
Shaving	3	...	1	1
Other leather machines ..	3	1	7	10
	20	17	21	18
Clothing Machines—				
Band knives	3	...	...	1
Boot machines	18	7	6	11
Fur-cutting	4	...	...	...
Ropemaking	2	6	4	1
Sewing	9	10	9	8
Wool machines	12	12	10	9
Other clothing machines	7	2	6	5
	55	37	35	35
Laundry Machines—				
Calenders	3	4	6	8
Folding	1	...	...	...
Hydro-extractors ..	...	...	2	...
Ironing	5	1	4	2
	9	5	12	10
Rubber Working Machines—				
Power presses	2	1	...	...
Rolling	2	...	2	...
Other rubber machines ..	4	2	1	3
	8	3	3	3
Brushmaking machines ..	...	1	1	...
Paintmaking machines ...	...	1	2	...
Soapmaking machines ..	6	2	1	2
Miscellaneous Machines—				
Elevators and cranes ...	11	26	24	30
Engines	6	9	5	5
Fan	1	1	...	1
Mill gearing	36	48	66	57
Other machines	...	...	13	4
	54	84	112	99
Total	657	601	677	756

Appendix XII.

Prosecutions by Districts, 1919–23.

Year.	Informations Laid.	Convictions.	Dismissals.	Withdrawals.
		Metropolitan.		
1919	47	46		1
1920	89	85		4
1921	67	62	4	1
1922	46	46		
1923	62	61	1	
		Newcastle.		
1919	13	13		
1920	25	23		2
1921	11	10	1	
1922	6	6		
1923	1	1		
		Rest of State.		
1919	13	13		
1920	5	5		
1921	3	3		
1922	8	8		
1923	7	7		
		The State.		
1919	73	72		1
1920	119	113		6
1921	81	75	5	1
1922	60	60		
1923	70	69	1	

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NEW SOUTH WALES.

DEPARTMENT OF LABOUR AND INDUSTRY.

REPORT

ON THE WORKING OF THE

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DURING THE YEAR 1924.

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THE TWENTY-EIGHTH SERIES OF ANNUAL REPORTS BY INSPECTORS APPOINTED UNDER THE FACTORIES AND SHOPS ACT, 1912, FURNISHED TO THE MINISTER FOR LABOUR AND INDUSTRY IN TERMS OF SECTION 19 OF THAT ACT.

The Under-Secretary, Department of Labour and Industry, to The Honorable the Minister for Labour and Industry.

Department of Labour and Industry,
30th July, 1924.

Sir,

I have the honour to forward for submission to Parliament, in terms of section 19 of the Factories and Shops Act, 1912, Annual Reports on the operations of that Act by each of the Inspectors appointed thereunder, for the year ending the 31st December, 1924.

I have, &c.,
F. W. KITCHING,
Under-Secretary.

OFFICE OF THE CHIEF INSPECTOR OF FACTORIES AND INVESTIGATION OFFICER.*

Operations.

Report in terms of Section 19 of the Factories and Shops Act, 1912.

Arrangement of Inspectorial Districts.

The provisions of the Factories and Shops Act were extended to cover the whole of the State, as from the 1st July, 1915. The area outside of the Metropolitan District is divided up into Country Districts, and the following statement will show the arrangement of these districts at the close of 1924 :—

District.	Head Centre.	Staff.
Newcastle	Newcastle	Inspector Armstrong.
		,, Clark.
		,, Darbon.
North Coast	Lismore	,, Ogilvie.
North Western	Tamworth	Senior Inspector Burkitt.
South Coast	Wollongong	Inspector Waugh.
South-Western	Goulburn	,, Wallace.
Southern	Wagga	,, Davis.
Western	Orange	,, Baker.
Broken Hill	Broken Hill	,, Young.

The Country District Officers, in addition to the work of factory inspection and investigations under the Industrial Arbitration Act, are required to carry out work under the Early Closing Acts as well as that pertaining to the departmental policy of Country Labour Exchanges.

Inquiries emanating from the Immigration Section of the department also devolved upon the Inspectors in both the metropolis and the country.

An important change was made with respect to the qualifications of applicants for positions as male and female inspectors, and the progressive examinations to be passed after appointment to the inspectorate. The re-organisation also included complete provision for the appointment of cadet inspectors. The whole scheme was embodied in regulations under the Public Service Act and gazetted 5th May, 1924.

The following promotions, interchanges of inspectors between Metropolitan and Country Districts, and alterations in control of districts were made during the year.

Mr. Senior Inspector Huntley became Superintending Inspector, and Mr. Inspector Dunleavy was gazetted as Senior Inspector.

Mr. Senior Inspector Dunleavy was transferred from Broken Hill to the Metropolitan District, and Mr. Inspector Young went to Broken Hill in his place.

Mr. Inspector Middlemiss was transferred from the Newcastle District to the Metropolitan District, and Mr. Inspector Darbon went to Newcastle in his stead.

The office at Wagga Wagga was closed and Mr. Inspector Durack returned to the Metropolitan District. The Wagga District was worked from Head Office, Mr. Inspector Davis being placed in charge.

At the end of June Mr. Inspector Ogilvie, then in residence at Lismore, became domiciled at Sydney, and worked the district by regular visits from Head Office.

Statistics.

Cards of instruction served on the occupiers of factories within the Metropolitan District numbered 22,121 for 1924, as compared with 12,611 in 1923; in the Newcastle District, 3,112 in 1924, as against 3,212 in 1923; in the Broken Hill District, 650 in 1924, compared with 625 in 1923; in the rest of the State 5,183, as against 5,981 in the previous year.

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* Matters covered by the Boiler Inspection Regulations made under Section 62 of the Factories and Shops Act, 1912, are reported upon by the Departmental Engineer and Chief Inspector of Scaffolding and Lifts.

Returns collected from factory occupiers for 1924 show that at the date of collecting the returns (29th November, 1924) 11,559 factories throughout the State employed 134,716 persons, compared with 11,058 factories employing 131,561 persons at the end of 1923, an increase of 501 factories and 3,155 persons. Male employment increased by 2,376, there being an increase of 1,013 under 21 years of age, and 1,363 over that age. Female employment increased by 779, there being an increase of 549 over 21 years of age and an increase of 230 under that age. Of the total persons employed, 98,302, or 72·9 per cent., were male, and 36,414, or 27·1 per cent., were female.

The following statement will show the increase or decrease in the number of factories and persons, males and females, employed therein, from the year 1915, when the whole of the State was brought under the provisions of the Act, to 1924 inclusive :—

Year.	Factories registered.	Increase over previous year.	Persons employed.		Total.	Increase over previous year.		Total.	Percentage of total increase.	
			Males.	Females.		Males.	Females.		Males.	Females
1915	7,425	1,432	70,517	28,706	99,223	7,181	1,901	9,082	79·1	20·9
1916	8,065	640	63,895	28,757	92,652	*6,622	51	*6,571	*100·8	0·8
1917	8,099	34	66,066	29,185	95,251	2,171	428	2,599	83·6	16·4
1918	8,346	247	74,719	31,246	105,965	8,653	2,061	10,714	80·8	19·2
1919	9,003	657	84,474	32,431	116,905	9,755	1,185	10,940	89·2	10·8
1920	9,745	742	92,566	33,479	126,045	8,092	1,048	9,140	88·6	11·4
1921	10,087	342	88,819	33,565	122,384	*3,747	86	*3,661	102·3	2·3
1922	10,674	587	86,935	36,142	123,077	*1,884	2,577	693	*271·9	371·9
1923	11,058	384	95,926	35,635	131,561	8,991	*507	8,484	*105·9	5·9
1924	11,559	501	98,302	36,414	134,716	2,376	779	3,155	75·3	24·7

*Decrease.

The number of effective registrations of factories as at the 31st December, 1924, was 11,754, as compared with 11,076 at the close of the preceding year.

The following statement shows the numerical alteration in factory registrations at 31st December, 1923 and 1924 :—

District.	Registrations effective at 31st December, 1923.	1924.		Increase.	Registrations effective at 31st December, 1924.
		Registrations.	Cancellations.		
Metropolitan	6,580	1,819	1,438	+381	6,961
Newcastle	1,150	267	189	+ 78	1,228
Broken Hill	153	23	18	+ 5	158
Rest of State	3,193	827	613	+214	3,407
Total	*11,076	2,936	2,258	+678	*11,754

* Adjusted figures.

The figures in this table are compiled as at 31st December, and therefore differ from the figures in the text following, which are compiled as at 29th November, the date on which the annual returns were collected.

Detailed figures as to the number and classes of factories, number and sex of employees, and horse-power of machinery used in the various districts of the State will be found in the Appendices I to XII.

On the 29th November, 1924, there were 6,868 registered factories in the Metropolitan District, employing 105,773 persons, an increase of 295 factories and 2,417 persons, compared with the figures at the end of the previous year. Of this increase, males represented an increase of 1,620, or 67·1 per cent., and an increase of 797 females, or 32·9 per cent., 675, or 27·9 per cent., and 531, or 22·1 per cent., being respectively an increase of males and females over the age of 21 years. Of the total persons employed, males represented 71,642, and females 34,131, or 67·7 and 32·3 per cent. respectively. Only 6,842, or 6·4 per cent., were under 16 years of age; 12,266, or 11·7 per cent., were between 16 and 18 years; 15,547, or 14·7 per cent., were between 18 and 21 years; and the remainder, 71,118, or 67·2 per cent., were over 21 years of age.

Of the total males employed, 2,949, or 4·1 per cent., were under 16 years of age; 6,166, or 8·6 per cent., between 16 and 18 years; 7,753, or 10·8 per cent., between the ages of 18 and 21 years; and the remainder, 54,774, or 76·5 per cent., were over 21 years of age.

Of the total females employed, 3,893, or 11·4 per cent., were under 16 years of age; 6,100, or 17·9 per cent., between 16 and 18 years; 7,794, or 22·8 per cent., between the ages of 18 and 21 years; and the remainder, 16,344, or 47·9 per cent., were over 21 years of age.

It is satisfactory to report that out of a total employment in the Metropolitan District of 105,773 only 6,842, or 6·5 per cent., were under 16 years of age. A comparison of the figures of each sex under and over 21 years of age is somewhat interesting, inasmuch as it demonstrates that, whereas the difference between the number of females of these ages is slight, the excess of males over 21 years of age is large. There were more females than males under 21 years of age employed in the factories in the Metropolitan District, but the males over 21 years of age exceeded the number of females over that age in the proportion of more than 3 to 1.

During the period of 1912 to 1914 the percentages of boys and girls under 16 years of age remained about the same, but for the period 1914 to 1924 the percentage slightly increased, as the following table will show :—

Percentage distribution of persons under 16 years of age.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1912	2·3	2·9	5·2	1919	2·6	3·4	6·0
1913	2·2	2·8	5·1	1920	2·5	3·4	5·9
1914	2·3	2·9	5·2	1921	2·6	3·6	6·2
1915	2·8	3·1	5·9	1922	2·6	3·8	6·4
1916	2·6	3·3	5·9	1923	2·7	3·8	6·5
1917	2·5	3·4	5·9	1924	2·8	3·7	6·5
1918	2·4	3·3	5·7				

Taking the males and females under 16 years of age collectively, there was a slight decrease during 1913 over the previous year, but from 1914 to 1924 the percentage gradually increased, equalling in 1915, 1916, and 1917 that for 1920, as the table indicates. The percentage for 1918 was slightly below that for the three previous years, being 5·7 as against 5·9, but for 1923 it was higher than for any year since 1909, when it was 6·8. The percentage for 1924 equals that for the previous year. The tendency seems to be for females to increase steadily, whilst males fluctuate.

The industry class employing the greatest number of persons in 1924 was clothing and textile fabrics, with 27,600, followed by metal works, machinery, &c., with 17,445, and food and drink, &c., with 14,731, these three classes accounting for 59,776 out of a total of 105,773 employed in all classes of factories in the Metropolitan District.

Clothing and textile fabrics showed an increase of 207, and metal works, &c., increased by 834, and food and drink increased by 874 as compared with 1923. The decreases in employment were in treating raw materials (287), oils and fats (68), woodwork (35), musical instruments (8), arms and explosives (1), vehicles and fittings (145), ship and boat building (687), surgical instruments (5), and leatherware (7).

The following statement will show the increase or decrease in persons, males and females, from 1915, when the Act was first extended to the whole State, to 1924 inclusive :—

Year.	Persons employed.			Increase over previous year.			Percentage of total increase.	
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
1915	54,891	26,438	81,329	.....	.....	.....	.....	.....
1916	47,378	26,649	74,027	*7,513	211	*7,302	102·9	2·9
1917	48,927	27,223	76,150	1,549	574	2,123	72·9	27·1
1918	55,355	29,145	84,500	6,428	1,922	8,350	77·0	23·0
1919	62,030	30,309	92,339	6,675	1,164	7,839	85·2	14·8
1920	68,583	31,270	99,853	6,553	961	7,514	87·2	12·8
1921	63,850	31,309	95,159	*4,733	39	*4,694	*100·8	·8
1922	66,888	33,802	100,690	3,038	2,493	5,531	55·0	45·0
1923	70,022	33,334	103,356	3,134	*468	2,666	117·5	*17·5
1924	71,642	34,131	105,773	1,620	797	2,417	67·0	33·0

* Decrease.

The following table shows the increase or decrease in number of factories and persons employed therein during the same period :—

Year.	Number of factories.	Increase over previous year.	Persons employed.	Increase over previous year.
1915	4,758	.....	81,329	.....
1916	4,814	56	74,027	*7,302
1917	4,799	*15	76,150	2,123
1918	4,942	143	84,500	8,350
1919	5,330	388	92,339	7,839
1920	5,842	512	99,853	7,514
1921	5,934	92	95,159	*4,694
1922	6,367	433	100,690	5,531
1923	6,573	206	103,356	2,666
1924	6,868	295	105,773	2,417

* Decrease.

Total increase—2,110 factories, 24,444 persons.

As at 29th November, 1924, 1,211 registered factories in the Newcastle District employed 13,103 persons, of whom 11,921, or 90·9 per cent., were males, and 1,182, or 9·1 per cent., were females. 62·4 per cent. of the females employed in the Newcastle District and 15·9 per cent. of the males were under 21 years of age. The large percentage of adult male employment was due to a great extent to the number employed at the steel and iron works of the Broken Hill Proprietary Company, Limited, at Port Waratah, Rylands Bros. (Aust.) Limited, The Commonwealth Steel Products, Limited, and other large works, aggregating 5,825, or 48·8 per cent. of the total number of males over 21 years of age.

In the remainder of the State, there were on 29th November, 1924, on the records of the Department, 3,480 registered factories, employing 15,840 persons, of whom 14,739, or 93 per cent., were males, and 1,101, or 7 per cent., females. This was an increase of 166 factories and an increase of 204 persons, as compared with 1923.

Horse-power of Machinery.

At the end of the year 1924, 9,072 factories throughout the State were using machinery equal to 310,402 horse-power.

Steam power, representing 165,006 horse-power, was used in 1,354 factories; gas power (17,391 horse-power) in 978 factories; electricity and other (128,005 horse-power) in 6,740 factories.

Child Labour in Factories.

Two hundred and eighteen children under 14 years of age (160 boys and 58 girls) were granted the special permission of the Minister to engage in factory employment. Seven thousand nine hundred and fifty-seven children were certified as physically fit for employment in certain classes of factories, and the examining Medical Officer declined to certify in one case.

Following is a table showing the distribution of the foregoing permits and certificates in the districts in which the State is divided for departmental purposes:—

District.	Permits granted.			Certificates of Fitness.	
	Special (to children between 13 and 14 years of age).			Issued.	Declined.
	Males.	Females.	Total.		
Metropolitan	156	58	214	7,335	1
Newcastle	4	.....	4	435	.....
Broken Hill	...	.....	...	5	.....
Rest of State	...	.....	...	182	.....
Total	160	58	218	7,957	1

By way of comparison, the numbers of special permits granted during the last ten years are shown hereunder, and the allocation of the children who were granted certificates into the various industries is shown in Appendix X.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1915	143	6	149	1920	142	38	180
1916	162	14	176	1921	125	44	169
1917	115	28	143	1922	116	61	177
1918	134	31	165	1923	152	74	226
1919	200	37	237	1924	160	58	218

New Industries.

Prominent among the new industries established during the year is the making of steel wire ropes. A modern plant, electrically driven, was put down at Newcastle and housed in a building 300 feet by 100 feet. Special attention was paid to ventilation and light, and the building being lofty and roofed with cement tiles the temperature should be satisfactory. The floor was laid in 10 feet squares of 1½ inch hardwood (double ply) allowing of easy removal as parts become worn. The plant comprises "winders," "stranders," and "closers," and the raw material is obtained from near-by works. The purpose of the company is to make wire ropes of dimensions varying from ⅜ inch to 9 inch circumference, and in full swing the works will employ about seventy hands.

The making of pianola music rolls locally was also commenced, and definite success achieved. The process is very interesting. The composition to be reproduced is played by the artist on a piano, to which is attached a recording machine which accurately records on a paper roll by means of special markings the notes played. This roll is then put through a master perforating machine, which punches out the markings of the recording machine. When completed this roll is called a "master," and is then placed in a perforating machine, and from it music rolls are made, fourteen at each operation. These are then taken to a stencil printing machine, and words, expression marks, &c., are printed thereon. They are then glued to paper tubes and reeled, tabled, labelled and boxed. The output is in the region of 8,000 rolls per week, and it is claimed that they compare very favourably with those made elsewhere.

Disc gramophone records are now made in this State from steel master records which are imported. The raw material is heated to a high temperature, and then pressed by powerful hydraulic force upon the master record. It is water cooled at the same moment by a special refrigerating process, and is then trimmed, tested, labelled and packed. The industry seems to be soundly established.

The process of tinning potato crisps was introduced late in the year. By means of a special machine potatoes are cut into corrugated slices, to prevent adhesion when packed. After being boiled in a special oil and drained the crisps are packed in tins, and are said to retain their quality for several months.

The manufacture of fancy articles from celluloid constituted another new industry. The raw material is imported in sheets, and is shaped in the factory into frames for mirrors, clocks, &c. Number-plates, letters, and index boards, &c., are also made.

The making of high-grade electro-plated kerosene lamps, specially constructed to burn, it is claimed, 96 per cent. air and 4 per cent. kerosene, was also commenced. The parts, in rough brass stampings, are imported from America, and after treatment by special machinery, involving pressing, soldering, and testing, are electroplated. The complete article, apart from its economy and utility is pleasing to the eye and gives a brilliant white light. All the machinery and tools required in the manufacture were made in Sydney, and many thousands of the new type lamp have been placed on the market.

Scientific blown glass used for chemical experiments, surgical, and commercial analytical work was formerly all imported, mostly from Germany. This class of work is termed "lamp blown," is very delicate and highly skilled, and is quite distinct from "furnace blown." Apart from the making of new articles, broken parts can also be repaired.

Manufacture was commenced of a new anti-corrosive for general commercial use. By means of a specially invented spray almost any surface can be covered with a coating of any molten metal. Apart from metal surfaces, such substances as wood, stone, brick, cement, glass, &c., can be metalised for protective, decorative, and other purposes. It is claimed that in other countries the process has proved its usefulness, and that it has been effectively used for large bridge work and marine work.

Overtime in Factories.

During 1924 the Minister granted applications for extensions of overtime in respect of 35 factories, affecting 14 male and 333 female employees. Similar permission was granted during the previous year in respect of 18 factories, involving 5 male and 268 female employees, and the figures for 1921 were 10 factories, and 241 females.

The following table sets out the classes of factory in which the additional overtime was worked :—

Class of Factory.	Factories.	Employees.		Total.
		Male.	Female.	
Class V—Metal Working.				
Canister making	1	...	18	18
Class VI—Food and Drink.				
Confectionery	5	14	78	92
Tobacco	...	...	...	...
Bottling	1	...	8	8
	6	14	86	100
Class VII—Clothing and Textiles.				
Tailoring	2	...	6	6
Class VIII—Books, Paper, Printing, &c.				
Printing	23	...	198	198
Photography	1	...	14	14
	24	...	212	212
Class XVI—Timepieces, Jewellery, &c.				
Jewellery	1	...	5	5
Class XIX—	1	...	6	6
Total	35	14	333	347

Fencing and Guarding of Machinery.

The sections of the Act governing the fencing and guarding of machinery were vigorously applied and the tendency of the occupier and operative to co-operate in safe-working was further advanced. Discussions between Inspectors regarding discovered danger points were instituted in a more comprehensive form by the holding of informal chats every Saturday morning. These meetings were well attended, and make for uniformity of action. Any particular guard, for example, is well examined, and where necessary the matter is handed to the Departmental Machinery Committee for special report. In this way the element of danger is most carefully analysed, and, where not entirely eliminated, is considerably reduced.

Wood-working and metal-stamping machinery, particularly, require constant attention, and while the standard of guard adopted leaves little to be desired, the work of the Inspector is nullified very frequently by neglect to adjust the guard when a change in work occurs. The system in some factories necessitates several operatives using the same machine at different periods and for somewhat different processes. Where piece-work obtains the hurry of the work causes forgetfulness and risk is taken which often induces accident. The "Safety First" principle is, however, gaining ground, and lends valuable assistance in the guarding of life and limb.

The steady increase in the use of electrical power affords additional assistance, as it allows independent control. This is a valuable factor, as it permits a more general use of the "one man" machine, with corresponding individual attention to the guard. It is possible also where several machines are driven by one motor to have more than one point of control, which is an obvious advantage.

Producer gas plants, with their many attendant dangers are becoming more numerous in country districts. Where it was made known to the Department that such plants were to be erected it was easy to obtain strict compliance with the regulations, but in several instances where the plants were erected without notice, considerable alterations had to be effected before registration was granted.

Laundry machinery received the usual special attention by reason of female operatives preponderating, and the guards at calenders and hydro-extractors were carefully watched. Commercial competition in standards has greatly aided the work of the Department in rendering these machines almost "foolproof." A satisfactory guard has not yet been devised for shirt, collar, and cuff ironing machines, but experiments are still proceeding.

A more general use of pipe uprights and railings, with the open spaces protected by stout wire mesh guards is noticeable, and transmissions generally are becoming increasingly safe. The old type of shaft coupling is gradually disappearing, being replaced by the modern safe type. The dangers attendant upon projecting key-heads, set screws, studs and pins have forced themselves upon occupiers and operatives alike, and are usually found well protected.

Constant vigilance is necessary at all machinery plants, and is illustrated by the multitude of instructions issued by the Inspectors during the year.

Following is an analysis of the reported accidents, and the extent of injuries:—

Extent of Injury.	Accidents Reported.				
	District.				Total.
	Metropolitan.	Newcastle.	Broken Hill.	Rest of State.	
Fatal	3	3	...	...	6
Permanent Injury—					
Loss of arms	...	...	...	2	2
,, hands	4	...	...	2	6
,, fingers or parts	126	21	...	16	163
,, leg	...	1	...	...	1
,, eye	1	...	...	...	1
,, foot or part	1	1	...	1	3
Temporary Injury—	132	23	...	21	176
Gas poisoning	...	9	...	...	9
Burns, scalds, &c.	62	60	1	12	135
Cuts, lacerations, bruises—					
On hands	317	112	...	28	457
,, arms	28	20	...	9	57
,, body	31	35	...	3	69
,, feet	2	29	...	...	31
,, head	16	50	...	10	76
Other	5	1	...	...	6
	461	316	1	62	840
Total	596	342	1	83	1,022

The following statement gives the distribution of accidents as due to machinery or other causes. Appendix XI contains details of machinery at which accidents happened.

Causes of Accident.

Machinery—

Metal working	310	Paper, printing	70	*Miscellaneous—*	
Woodworking	180	Leather	9	Mill gearing	87
Stone, clay, &c.	6	Rubber	12	Engines	5
Food and drink	45	Other	56	Elevators, conveyors, &c.	57
Clothing, &c.	31			Fan	1

Other Causes.

Dangerous substances—		Electricity	3
Steam	4	Chemicals	5
Hot substances—		Gas	15
Water	9	Other	6
Metal	59		
Other	52	Total	1,022

The accidents which resulted fatally are briefly described as follows:—

A blast furnace at a large steelworks was being partly demolished by explosion. A hole had been made in some reinforced cement, and in order to scrape it out, an employee picked up a piece of pipe and commenced to hammer it to flatten the end for the purposes of scraping. It was assumed that by some means a detonator was inside the pipe, and exploded and drove a piece of the pipe into the man's groin, severing the femoral artery, and he bled to death in a few minutes. It was not possible to ascertain by what means the detonator came to be inside the pipe.

A cast-iron steam-pipe between the high and low pressure cylinders on a blower engine in a large steelworks burst, injuring four employees. One man was extensively scalded over the whole body, and also sustained a compound fracture of his left leg and succumbed to his injuries. Three other employees sustained non-fatal injuries—shock, and more or less serious bruises and abrasions. An inspection of the broken piping showed it to be of faulty manufacture, and of varying thickness, and it evidently burst at a weak spot in the pipe.

An engineer engaged in erecting a new plant at a country brickworks was timing the revolutions of an intermediate shaft. The shaft and pulleys appeared to suddenly come adrift, and the belt, flying with terrific force from the pulley, caught the engineer and hurled him into the engine-room. He sustained such serious injuries—compound comminuted fractures of both thighs, general abrasions and extreme shock—that he succumbed the next day.

A labourer at a brickworks was inside a grinding pan cleaning the scrapers with a crowbar when the driver of the machine, not noticing the labourer's presence, started the pan. The labourer was severely crushed about the thighs and abdomen and died of the injuries. The driver stated that had he started the machine at the proper place, a platform beside the pan, he would have seen the deceased, but the belts were slack and did not respond to the belt shifter, and he went underneath the machine and shifted the belt on to the fast pulley by hand.

A labourer in a smelting works was fatally scalded through falling into a pit of water which becomes heated through the dipping of hot copper sheets into it. The employee was shortsighted and was employed in another portion of the factory, but was walking through the part in which the pit is and fell into it with the result stated.

A man employed at a large steel works was working with a fellow employee at a pig-iron breaker. To place the iron to be broken near the breaker an electro-magnet crane was used. This consists of an ordinary crane with a large magnet, capable to lifting up to 1 ton weight, attached to the hook. Deceased's companion was operating the crane when he heard deceased cry out. He ran out to him and ascertained that he had been struck by the descending magnet. His back was broken and his legs paralysed, and the injuries subsequently proved fatal. The crane driver stated that he had no idea the deceased was in the position where he was struck, but imagined he was at the breaker, which was situated about 12 feet away.

Means of Escape in case of Fire.

In the comparative rebuilding of the city, which was greatly advanced during the year, much work was occasioned in viewing the various alternative means of escape from fire. Where the building was being newly erected and plans were exhibited to the Department there was little difficulty, but in those cases, and they were in the majority, where no notice was given, there were many complications. Many buildings were altered in construction, or extended, the provided means of escape being, in some cases, rendered useless. In many premises with only one stairway and not previously occupied, even in part, as factories, rooms were leased above the second floor for factory purposes, and the owners or persons receiving the rent were apparently surprised when instructed to provide alternative means of escape. In the absence of any Building Act compelling a second means of escape in all premises above a certain height, and with numberless instances on all hands of such conditions obtaining in non factory premises, this surprise is in a measure justified. Reference to the Department before effecting leases would save much trouble.

The provision of a separate stairway within the factory, rendered fire resisting and smoke proof, or of easy access by platform or roof to the adjoining building is the type of escape most favoured by the Chief Officer of Fire Brigades. Not only are they more easily traversed, and therefore more safe, but maintenance cost is reduced to a minimum. On the other hand external escapes, especially those attached to lofty buildings, leave much to be desired, and being fully exposed to the weather require overhauling and painting frequently to ensure proper utility. Several striking instances were discovered during the year of the value of inspection of the means of escape provided. At one building of seven storeys the external iron stairway was found, in parts, to be quite unsafe; another cluster of factories in a large building, in the heart of the city, were deprived of alternate means of escape by reason of building extensions blocking access. These and many other serious defects were promptly rectified.

The old time perpendicular ladder escape is now very rarely encountered and when found is quickly condemned, giving place to an iron stairway double railed and fortified by strong mesh wire from the lower rail to the stringer. As nearly as possible an angle of forty-five degrees is insisted upon as the minimum, with a stair width of 2 feet 6 inches and an easy rise in the treads.

External wooden stairways are not now favoured and those in use pending the rebuilding of the premises are carefully inspected and maintained in good order.

Heating appliances, electric and gas lighting, fire extinguishers and buckets were carefully supervised and proximity of inflammable material closely examined.

In some of the larger factories fire drills are regularly held, a practice that is in every way commendable.

It is interesting to note that 114 sprinkler installations and 70 May-Otway fire alarm systems in buildings, mainly factories, are directly connected with the headquarters station of the Metropolitan Fire Brigades.

The Chief Officer of Fire Brigades maintained his customary close co-operation throughout the year and certified during that period 112 factories as being provided with satisfactory alternative means of escape.

Prosecutions.

During the year informations for breaches of the Factories and Shops Act and Regulations were laid in eighty-nine cases.

Following are the details :—

		Convictions.	Dismissals.	Withdrawals.	Total.
Section.					
7	Being in occupation of unregistered factory	3	.....	.....	3
14	Failing to keep record of employees	1	.....	.....	1
20	Failing to keep premises in a cleanly state	3	.....	.....	3
33	Failing to fence dangerous machinery	17	.....	1	18
38	Failing to report accidents	1	.....	.....	1
42	Working a lad more than 5 hours without an interval	1	.....	.....	1
43	Breaches of overtime provisions	27	.....	1	28
45	Employing children under 16 without certificates	12	.....	.....	12
49	Working or permitting work in furniture factories after hours	13	.....	.....	13
56	Failing to comply with order	1	.....	.....	1
68	Failing to pay tea-money	1	.....	.....	1
Regulation.					
1 of 10-3-16	Failing to have boilers inspected	4	.....	.....	4
15	Failing to provide w.c. accommodation	2	.....	.....	2
16	Failing to provide wash-basins	1	.....	.....	1
	Total	87	.....	2	89

WALTER I. TAYLOR,

Chief Inspector of Factories and Investigation Officer.

BOILER REGULATIONS.

Report of Mr. P. A. Fildes, Departmental Engineer.

During the year, 134 boilers and 159 other pressure vessels were newly installed and 30 boilers and 19 pressure vessels were discarded. The number of the various types of boilers and other pressure vessels inspected is given in the following table :—

	Inspections.			Vessels.		
	First.	Re-inspections.	Total.	Discarded.	Newly Installed.	Explosions.
Boilers—						
Marine Wetback	1	9	10	.....	1	.....
,, Dryback	5	34	39	.....	1	.....
Multitubular	11	249	260	.....	3	.....
Cornish	10	141	151	1	1	.....
Vertical	157	604	761	20	45	.....
Colonial	110	762	872	2	29	1
Locomotive, including Portable, Traction and Road Rollers	180	435	615	5	19	.....
Watertube	36	399	435	1	21	1
Lancashire	1	96	97	1	1	.....
Cast-iron Sectional	10	29	39	.....	10	.....
Jackass	2	27	29	.....	.....	.....
Wolff	.....	3	3	.....	.....	.....
Egg-ended	.....	4	4	.....	.....	.....
Other Steam Generators	4	13	17	.....	3	.....
Total	527	2,805	3,332	30	134	2
Other Pressure Vessels—						
Jacketed Vessels	49	746	795	3	24	1
Cylinders, Drying Drums and Boilers (Steam Heated)	12	233	245	.....	40	.....
Air and Water Receivers	80	346	426	2	22	.....
Digestors	6	101	107	1	3	.....
Hot Tables :—Presses, Drying Tables, Cantilever Presses, Patching Tables	14	138	152	.....	6	.....
Autoclave Presses	2	13	15	.....	2	.....
CO_2 Cylinders and Purifiers	8	118	126	.....	3	.....
Vulcanizers	52	165	217	9	38	.....
Calenders, including Mangles	12	95	107	3	7	.....
Steam-heated rolls	1	2	3	.....	.....	.....
Desiccators	.....	5	5	.....	.....	.....
Retorts	9	41	50	.....	5	.....
Vegetable steamers	.....	1	1	.....	.....	.....
Copper Coils and Pipe Heaters	6	90	96	1	2	.....
Montejus and Crystallizers	1	28	29	.....	1	.....
Vaccum Vessels	1	7	8	.....	.....	.....
Economisers	2	9	11	.....	.....	.....
Steam Separators	.....	3	3	.....	.....	.....
Stills	1	21	22	.....	.....	.....
Sugar Driers	.....	1	1	.....	.....	.....
Sterilizers	1	5	6	.....	1	.....
Oil Receivers	.....	4	4	.....	.....	.....
Superheaters	.....	2	2	.....	.....	.....
Stout and Wine Butts	.....	61	61	.....	.....	.....
Steam-heated Vessels	7	63	70	.....	4	.....
Coolers	4	22	26	.....	1	.....
Total	268	2,320	2,588	19	159	1
Grand Total	795	5,125	5,920	49	293	3

Seven thousand six hundred and ninety-one reports in connection with the inspection of steam boilers and other pressure vessels, were lodged by accredited Inspectors, as follows :—

	Reports received.		
	Boilers.	Other Pressure Vessels.	Total.
Prescribed Reports:—			
First Inspections	527	268	795
Reinspections	2,805	2,320	5,125
Total	3,332	2,588	5,920
Non-prescribed Reports:—			
Internal	991	741	1,732
External	36	3	39
Total	1,027	744	1,771
Grand Total	4,359	3,332	7,691

The following is a summary of notices served upon factory occupiers, to ensure compliance with the requirements of the Boiler Regulations :—

	Boilers.	Other Pressure Vessels.	Total.
Pressure reduced	127	23	150
Pressure increased	25	26	51
Safety valves	51	10	61
Reducing valves	4	1	5
Locked safety valves	25	1	26
Pressure gauges	28	1	29
Casing in lever safety valves	8	.. ...	8
Gauge-glass protectors	88	.....	88
Water gauges	7	.....	7
Test cocks	16	.....	16
Cocks between check-valve and boiler	27	.....	27
Valves on steam connections	1	.....	1
Isolating valves	58	.....	58
Blow-off cocks	13	.. ...	13
Patches	.....	.....	.....
Fusible plugs	42	.....	42
Unclassified	24	6	30
Total	544	68	612

During the year the Minister granted 10 certificates of approval to inspect boilers, &c. One hundred and ninety certificates were in force at 31st December, 1924; 126 are located in Sydney and Suburbs, 16 in Newcastle District, 46 in country districts and 2 in Victoria.

Representations were made and ultimately agreed to that certain Victorian Government boiler Inspectors whose districts are adjacent to the south-western border of N.S.W. should be accredited under the N.S.W. Boiler Regulations. In 2 instances the Minister granted certificates of approval, and the reports of inspections made by the holders thereof are lodged in form and manner prescribed.

Difficulty has been experienced by factory occupiers located in outlying parts of the State in obtaining the services of accredited inspectors to enable compliance with the Boiler Regulations.

An explosion occurred from a Colonial type steam boiler installed in a factory. This explosion, fortunately, was not accompanied by injury to any person.

The explosion, which took the form of a split in the shell, appears to have been caused by an accumulation of scale on the bottom of the boiler at a point about 10 inches from the back end, which resulted in the plate becoming overheated and bulged. The plate, which had become thin from corrosion, and probably also from previous overheating, was rent, and through the opening in the boiler thus made the contents of the boiler were discharged.

At the time of his immediately preceding inspection the accredited Inspector called the owner's attention to the accumulation of scale on the bottom of the boiler, and that the accumulation was caused or aggravated by the presence, immediately above it, of the internal blow-down pipe.

The Inspector recommended the removal of this pipe and the fitting of a mud-leg and blow-down pipe in the ordinary way ; the boiler failed, however, before the recommendation was given effect to. Had this been done, there is reason for believing the explosion would not have occurred. The alterations recommended have now been given effect to, and the evil causing the mishap removed.

A steam-jacketed copper pan operating under a steam pressure of 75 lb. per square inch used in a factory for boiling sugar syrup, suddenly exploded, and two persons, male and female, were badly scalded about the face, neck and arms, by the escaping steam and boiling syrup.

Upon enquiry by a departmental Inspector, it was found that the steam jacket of the pan was not automatically drained of condensation through a steam trap ; dependence being placed on a manually operated wheel valve attached to the bottom of the pan. The results of the inquiry led to the conclusion that the accident was caused by water-hammer, owing to the drain valve having been improperly operated.

From representations made to the factory occupiers, steam traps were forthwith fitted to all similar pans in use in the factory, and a similar accident is not anticipated.

Mr. Superintending Inspector Armitage reports :—

Ventilation.—During the year my duties were confined to superintending work, and I found that, in the new registrations submitted, there was frequently a lack of provision for natural ventilation. Some of our larger establishments in the textile trade are providing very good mechanical systems of ventilation, the air being washed before being forced into the factory. This is done by drawing the air through a curtain of water. I have examined the sludge at the tanks after the air was washed, and was surprised to find the amount deposited.

In Sydney, one of the largest cities of the world, the atmosphere is of the cleanest. This can be judged by the appearance of the outside of our buildings. The most serious trouble is in the ventilation of the modern building of reinforced concrete with walls only 9 inches thick for a height of several stories. If factory owners would only provide shafts 6 inches or 4 inches in diameter with vents 18 inches from the floor, and, for the lighter gases, 10 feet from the floor, they would find the air movement and the quality of the air greatly improved, and the employee in a much better condition for his work.

One country municipal council submitted plans (after the building was constructed) for its electric light station for which the motive power was derived from a suction gas plant which generates the most deadly poison (carbon monoxide). The producer section directly communicated with the engine-room, and this was done notwithstanding our factory regulations, which clearly set out that a suction gas plant must be in a detached building. The difficulty was overcome by taking off part of the roof and making a 4-feet area between the engine room and the suction gas plant.

Machinery.—Particular attention was paid to the efficient guarding of hydro extractors and laundry machinery in the metropolitan area. The major portion was found to be in a satisfactory condition. Several needed repairs and a few were of unsatisfactory design.

Occupiers were most willing to have effective safety appliances remedied.

In the matter of large calenders the sides and backs are required to be guarded with woven wire shields. A little opposition was met with at first, but after erection they were appreciated by the laundry occupiers.

The trigger guards on calenders as enforced by the Department have prevented many accidents.

In the woodworking industry, special consideration was given to the guarding of hand planers and spindle moulders. One large manufacturer after two successive accidents explained that, for the class of work he did, he could not guard his hand planer. After it was demonstrated how it could be done, he erected a bridge type of guard over the knives and is now using these guards in his work. He admitted, in the course of conversation, that in one fatal accident in which the Department proceeded against him for failing to maintain the fencing of his machinery, it cost him several hundred pounds as the insurance company, after his conviction, would only pay half the amount claimed as compensation. The spindle moulder is the cause of numerous accidents which, in my opinion, can be prevented by the application of a fillet guard projecting over the top of the cutters. I might point out the advantages of the English Act, under which regulations may be framed prohibiting the use of certain makes of machines, such as the square cutter in the hand planer, and allow only the use of circular cutters, which minimise accidents. The advantage of the circular cutter is that, if an operator's hand slips on to the knives, only a slight flesh wound results as against loss of fingers or, possibly, the hand with the square cutter.

A serious problem is the vast crop of minor accidents which happen in the wire drawing and wire weaving works. I am not aware of any guards which would minimise accidents caused when handling the wire in the different operations, and which sometimes result in loss of fingers.

Mr. Superintending Inspector Huntley reports:—

During the earlier part of the year my time was fully occupied in performing the duties usually carried out by Mr. Superintending Inspector Armitage, then on leave. Shortly after his return I reverted to the training of new inspectors in routine and district work, and also assisted in the arrangements for the projected reorganization of the inspectorate. Upon its completion and gazettal I was appointed as Superintending Inspector, with duties principally indoors.

In such position I was in constant touch with the inspectorate both in the metropolitan and country, being charged with the oversight of attendance and conduct in the office and all matters relating to inspectorial tours. Under instructions I paid several visits to the country.

The various departmental models of machines and guards were collected, and now form an exhibit or museum, which is open during office hours for inspection by any employer or employee interested. The convenience has been largely patronised and much appreciated.

An Inspectors' library was also established, containing a large number of technical works and other appropriate publications. The catalogue will be added to as occasion permits and will, it is anticipated, embrace the latest information as to industrial progress and happenings over the world.

Another innovation was the institution on Saturday mornings of meetings of available Inspectors, when any difficulties encountered by individual Inspectors during the week, or other matters of interest are discussed. The practice has proved popular, and, apart from its informative side, has harmonious tendencies.

Three conferences of metropolitan and country Inspectors were held during the year, and were well attended. The opportunity thus provided of the country Inspectors being kept in touch with departmental development is well reflected in results. In addition to discussions upon problems arising out of administrative work, addresses were given upon technical matters allied with the Branch work, and many interesting and informative papers were read. The practice was established of referring copies of such papers prior to the conference to certain officers asked to open the discussion upon same, and the resulting criticisms were keen and full of interest.

The agendas have been favourably reviewed, and the value of the conferences endorsed.

It was decided that in the future two conferences, each of longer duration than formerly, should be held in each year.

Mr. Senior Inspector Dunleavy reports:—

In February I left Broken Hill district and took charge of a district in the metropolitan area.

Registrations.—A number of factories were registered during the year and a number enlarged their premises.

Sanitation.—Special attention was given to the sanitary and hygienic conditions of the factories under my supervision, and I am pleased to report that vast improvements are taking place from year to year. I had occasion to take proceedings against one occupier, who was fined when brought before a magistrate.

Fencing Machinery.—Constant attention has been paid to this portion of factory inspection, especially in those factories where belt-driven machinery is still in general use.

In the newer factories, or the more up-to-date factories, where machinery is electrically driven, some of the dangers are becoming less, although careful attention has to be still given to the newer type of machinery.

Careful attention has been given to the guarding of dangerous machinery wherever necessary.

Accidents.—Although there were a few accidents, I am pleased to report there were no fatal accidents in my district during the year.

Bakehouses.—Bakehouses still require a considerable amount of attention, and invariably I have had to give instructions to lime-wash, and in many instances to clean up the factory, especially in the older type of bakehouse.

Certificate of Fitness.—It is surprising to find quite a large number of occupiers who neglect to obtain certificates of fitness for employees under 16 years of age, and who disregard that section of the Act unless their attention is directed to it.

Fire Escapes.—In the city area fire escapes require special attention. Buildings which I drew attention to some years ago were still inadequately supplied with the means of escape in case of fire.

With the co-operation of the Fire Brigade officers I am pleased to report that two or three very dangerous buildings have been provided with good fire escapes, and a number of fire escapes have been repaired and repainted during the year.

Boiler Inspections.—I have given attention to this matter and in a number of cases have given instructions to have the boilers inspected in accordance with the regulations. In one place I came across a couple of boilers that had not been inspected for four or five years, and when an Inspector was sent to make a test he found that one boiler had been plugged with cement and was in such a condition that it was impossible to give a certificate.

Mr. Inspector Bennet reports :—

As from the 2nd January, 1924, I resumed duty at Head Office, and prior to taking charge of No. 3 Factory District (comprising city and suburban areas) I assisted in the tabulation of towns visited in New South Wales, the preparation of area groups, and other internal matters.

Registrations.—There were a considerable number of registrations of new factory premises, in addition to many re-registrations consequent upon the change of occupancy or the extension of operations of existing firms in separate buildings.

No new industry came under my notice in this district during the year.

Structural Conditions.—Keen competition has led to a noticeable improvement in building design and construction, concrete predominating in the city, whilst bricks displace the wooden shed in the suburbs; these are welcome. On the other hand, two buildings used for factory purposes were condemned, due to old age and a serious state of disrepair, the occupier in each instance being allowed a reasonable period to vacate.

Hygiene.—Notwithstanding the advance of modern building construction and the competition in the architectural profession, two of the latest buildings in the city were recently erected without any means of ventilation other than by window and door. In one case I met the architect and had ample provision made before actual completion. The other instance is at present receiving attention. Modern practice tends to dispensing with fanlights and inlet ventilators, though considerable thought is given to the provision of natural light and lavatory accommodation. Were architects compelled to submit plans of proposed new factories or proposed remodelling of old premises, setting out the nature of the industry to be carried on, together with details regarding ventilation, light, lavatory accommodation, dressing rooms, &c., and to secure a permit from the Department before building operations commenced, much good would result.

By reasons of directions served, the management of one large soap works decided to close down for a period of two weeks, during which a thorough cleaning, limewashing and painting, and rearrangement of employees' accommodation was satisfactorily carried out. In a large works employing several hundred persons, considerable improvement has been effected to the natural lighting, ventilation and W.C. arrangements.

Fencing and Guarding of Machinery.—This subject absorbed the major portion of my time and study for the year, with gratifying results.

In several large factories, many days were spent in each, resulting in extensive directions being served upon the respective occupiers, particularly in relation to the fencing of machines, and in many cases the rearrangement of machinery to do away with obvious dangers. Discussion with employers and operators frequently led to the conception and adoption of some excellent guards to suit a particular instance. I found that the greatest opposition to the provision and maintenance of guards came from the person for whom the guard was specially designed to protect. Realising this particular point I directed special efforts, not only to get the operator to understand his responsibility to himself and his fellow workers, but to extract from him his own idea of a suitable guard, and further to assist him to develop and apply that idea. Where I achieved such a result, the worker gave evidence of considerable pride in the adoption of a guard embracing his own conception of safety.

Considerable time was given in consultation with consulting engineers and managers of factories as to the dispositioning of machinery, both in new installations and the remodelling of old workshops.

Accidents.—Though a considerable number of accidents occurred during the year, many of them serious, it is pleasing to state that none proved fatal. The most serious occurred at a wood-working factory, whereby an experienced machinist had three fingers taken off at a spindle moulder which, at the time, was unguarded. In another case a man's arm was severely burnt by hot bitumen (temperature 330 deg. F.) splashing from a trough. Reviewing the accidents which occurred during the year, and the causes, I am impressed with the great importance of constant attention being given to the guarding of dangerous machines.

Fire Escapes.—The Metropolitan Fire Brigades officer was frequently called upon by me to approve of several new escapes, including the replacement of old escapes which had been removed without notice, due to adjacent building operations. Owing to the peculiarity of leases and perhaps the sale of a property, three or four rather complicated situations arose, but were satisfactorily overcome and fire escapes installed. In two instances (6-storey buildings) I required new set screws to be fitted to the steps throughout, and the fire escapes properly painted.

Bakehouses.—I inspected many of these, and where it was necessary to give directions, they were sharp and short and promptly carried out in a satisfactory manner.

General.—Reviewing the year's work, I may safely say that much useful work has been accomplished. In the position of an inspector, one is also an observer, and by reason of this fact I was able to offer some concrete suggestions at various places, which have been accepted. For instance, at a rubber works I suggested the provision of a series of simple slat conveyors so situated that the throwing down on the floor and the picking up of the articles being treated was saved in three distinct processes of manufacture. In a large box factory there is an inclined race about 150 feet in length where boxes shoot down from the works to the wharf, landing at the bottom at a terrific speed and a constant danger to the employee who is "taking off." I suggested the use of an adjustable spring buffer, whereby all danger is eliminated. At a large pipe works there is a source of danger of scalding from hot bitumen of a constant temperature exceeding 300 deg. F. A practical suggestion was offered to the management and discussed with the firm's consulting engineer, with the result that the firm has decided to alter the process and adopt the suggestions offered.

Mr. Inspector Dunwoodie reports :—

Registrations.—These were fairly numerous, but confined principally to change of occupiers, new factories not being a notable feature in this respect. In some cases, overseas firms have established themselves here in pursuit of their businesses.

Structural Conditions.—There has been no occasion to report anything of an outstanding nature, factories being generally in accord with requirements. Occasionally occupiers have found it desirable to move into larger and more suitable premises to cope with their growing needs.

Sanitation.—Conditions generally have been reasonably satisfactory. Occasionally instructions to improve light and ventilation have been served on occupiers. In some cases attention was directed to untidy premises, the defects being promptly removed.

Fencing of Machinery.—In this respect the general tendency is towards improved conditions, but constant supervision is necessary. Any deficiencies coming under notice suggested ignorance to a more or less extent of the departmental requirements rather than a desire to evade the provisions of the Act. Instructions, often with assistance in the manner of application, invariably met with ready compliance. Constantly increasing activities, often involving the use of new mechanical appliances, frequently necessitated a variation of the more general method of guarding. In this respect it is pleasing to note that occupiers often seek the assistance of this Department, a feature always encouraged and promptly accorded. One regrettable aspect often met with is the indifference of some workmen in the use, or care and maintenance, of safety appliances provided for their protection, together with the unnecessary risk this carelessness entails. Following the well established principle of this Department, constant effort is exerted at all times to improve on existing methods of guarding, and in designing new types of guard to minimise, as far as possible, the risk of accident. In this respect, it has been possible to effect a considerable reduction in the cost of some of the safety appliances, without impairing their utility.

Boilers.—It was found necessary on some occasions to instruct occupiers to exhibit Boiler Certificates which were mistakenly placed in secure places for safe keeping.

Accidents.—One fatal accident occurred during the year. A flexible electric light cable was suspended from overhead beams, from which a loop was found to be making contact with a machine at which a male operator was working. There were two women assisting him in the process. Constant vibration of the machine had chafed the insulation on the cable to such an extent that the wires conducting the current were bared at the point of contact with the machine, causing the current to "short" through the machine to earth. Due to the wet conditions this work entailed, this short circuit also affected connecting benches and the persons working there. When this occurred, one of the women was in the act of pouring boiling liquid from a vessel held in her hands into tins on the bench. The resultant shock caused her to clutch the vessel towards herself, causing the boiling liquid to upset over the front of her body, from the neck down, to which she succumbed later. The other two operators also experienced the electric shock. Subsequent examination showed that this electric cable, with the exception referred to, was in good order and condition.

A serious accident occurred at a circular saw, resulting in the loss of an eye, caused by a flying splinter of wood. A guard was fitted at the time of the accident. Investigation showed that the operator had defective vision, necessitating him placing his face in close proximity to his work to see the line of cut. In this position, a small piece of wood coming in contact with the teeth of the saw was hurled towards him with considerable force, striking him in the eye.

One accident was shown to be negligence on the part of the occupier, which was followed by prosecution and conviction.

Numerous other accidents investigated were of a minor character, occurring in factories employing a large number of persons. These were principally confined to young persons, in the majority of cases caused by ignorance or carelessness. More stringent supervision and discipline on the part of foremen and others concerned would help towards an improvement in such cases.

Bakehouses.—The conditions, generally, were fairly satisfactory. In a few instances instructions to lime-wash were necessary, and promptly complied with.

Fire Escapes.—This section of the Act has received careful attention, and any shortage coming under notice was rectified as early as possible. New fire-escapes were completed, and several others were inspected, and approved, by the Chief Officer of Fire Brigades.

Certificates of Fitness.—On some occasions it was necessary to instruct occupiers to comply with this section of the Act; otherwise, the requirements have been fairly well maintained.

General.—Following the clearly defined principle of this Department, considerable effort has been made, with a satisfactory measure of success, in the matter of improvement on existing safety appliances, also to cope with, and where possible, anticipate the constant demands of ever-increasing activities.

Mr. Inspector Durack reports :—

During the early part of the year I resumed duty at Head Office, after an absence of three years in the Southern District. A suburban area, together with a small portion of the city, was allotted to me, and in the course of the year I performed special duties, such as inspection of private employment labour agencies and work in connection with the immigration section of the Department.

Registrations.—A large number of new premises have been erected, mostly in connection with the motor body building industry. These buildings are all of a modern type, and in all cases were up to the standard required by the Act and regulations.

Fencing and Guarding of Machinery.—As usual, very close attention was given to machinery, and where the guards were not sufficient both occupier and operatives were immediately informed and proper and approved guards were provided forthwith.

Although in most instances I found occupiers ready and willing to comply with the requirements of the Act, yet, in some cases, I found a continued and studied unwillingness on the part of occupiers to provide guards for dangerous machinery. This was most noticeable in the sheet-metal industry. One occupier was so remiss in this matter that he was prosecuted on two occasions—the first time a fine of £5 and costs being imposed, and on the second occasion a fine of £10 and costs was inflicted. Soon after the whole of the guards necessary for the protection of persons working on the power presses were provided, and have since that time been efficiently maintained. Woodworking machinery had my close attention as well as hydros, and all laundry machinery.

Sanitation.—This matter requires very careful attention, and during the year several orders were given to occupiers for alteration and additions to premises, and in a number of instances orders for the erection of new and up-to-date W.C. accommodation. Seating accommodation, a copious supply of good drinking water, and provision of dressing rooms had a good deal of attention, everything being done to ensure good and wholesome surroundings for those working in and around the factory.

Accidents.—During the year there were several accidents of a minor nature, and a few were rather serious. In one case I found that an operative had the tops of four of his fingers on one hand so severely bruised that the top joint on each finger had to be amputated. This accident happened on a planing machine whilst the employee was bevelling the sides of a deck scrubbing brush. A telescopic guard was fitted on the machine, but the operative did not take the trouble to properly adjust the guard, with the result that his fingers got under it and came in contact with the knives. The other rather serious accident happened on a 6-inch jointer machine, and, as in the above case, the operative did not adjust the guard to the level of the material he was working on, with the result that his thumb came in contact with the knives, and was so badly injured that it had to be amputated. In this case the employee informed me that he would rather work without the guard, as he could see his work much better when the guard was off the machine.

Fire Escapes.—This section of the Act occupied much time, many fire escapes being inspected in company with the Metropolitan Fire Brigades' officer. In some instances we found the doors leading to the fire escape locked and the passage ways blocked with goods or other material. These conditions were promptly rectified, and orders were given for the painting of outside stairs. On a future inspection we found all orders had been attended to by the occupiers and the fire escapes efficiently maintained, and were in every case up to the requirements of the Act and regulations.

Bakehouses.—The conditions in bakehouses throughout the district were on the whole fairly satisfactory. In three instances where bread and pastry were manufactured on the same premises I had to insist on several alterations and additions. I also had provision made for better sanitary conditions, the elimination of smoke and steam, and the installation of hoods and flues, together with air vents in every bakehouse inspected at that time.

Certificates of Fitness.—A number of directions have been given to occupiers during the year to obtain certificates of fitness for all persons under 16 years of age. I found in many cases a peculiar misreading of the Act in regard to the provision of certificates of fitness for boys, several occupiers insisting that so long as the lads did not work any machinery there was no need to provide a certificate. However, when matters were explained to the occupiers, the necessary certificate was obtained forthwith.

Overtime.—The requirements of the Act and regulations in respect to overtime have been fairly well observed by occupiers during the year.

Mr. Inspector Hastie reports :—

Registrations.—During the year the registrations in my district have been fairly numerous, although mostly confined to change of occupancy. New premises were erected at Castle Hill, and occupied by a firm manufacturing bricks, the building complying in all respects with the requirements of the Factories and Shops Act. Another new building containing four floors, and constructed of brick and reinforced concrete was erected in the city.

Structural Alterations.—Under this heading it was found necessary to issue instructions for alterations on two occasions only. The lavatory accommodation in a printing establishment, employing both sexes, was found to be unsatisfactory, and instructions were given for certain alterations and they were carried out.

In premises in which there were a number of factories housed under the same roof the temperature was excessive, and instructions were given to provide means for reducing the temperature. This was complied with by providing a ceiling, which produced the desired result.

Fencing of Machinery.—This feature of the work needs a great deal of care and attention. Frequently it occurs that an operator will remove a guard to make an adjustment to the machine, and will then resume working without replacing the guard. A common fault is failing to maintain guards and fencing in a satisfactory condition. It is more noticeable where wood is used for stanchions and rails, being in such a condition that if a person were to lean against them they might give way, being therefore a menace instead of a protection. Instructions were issued on a number of occasions to replace this wood with iron piping, for stanchions and rails, and stout wire mesh netting between the rails. It is pleasing to note that the instructions were effectively carried out.

Accidents.—Few accidents were reported in the district during the year, mainly of a minor character, although two were rather serious. A young lady had portion of her hair removed from the scalp by it being caught round a small length of shafting situated 16 inches from the floor. The girl was kneeling down, and, in bending over, her hair became entangled with the revolving shaft.

An adult male lost his right hand through being caught between two cog-wheels. He was oiling the machine while same was in motion (this being contrary to orders), and stepped in under the fencing. His foot slipped whilst he was leaning over, and in trying to save himself he threw out his arm, the hand being caught in the cogs.

Fire Escapes.—Several alternate means of escape were required by the Chief Officer of Fire Brigades, and on the instructions being issued to the occupiers were carried out satisfactorily. On several occasions instructions were given to keep the fire escapes free from obstruction.

Boilers.—These regulations have been well observed. There has been no necessity to report for failing to have the boiler surveyed, although it has been necessary to instruct the occupiers to exhibit the certificates.

Certificate of Fitness.—There seems to be a misunderstanding on the part of occupiers in respect to certificates. They occur mostly in small factories, where they accept a school certificate as being satisfactory. On the error being pointed out, it is rectified immediately.

Overtime.—No application was received from this district to work overtime.

Bakehouses.—These were found to be generally well up to the requirements of the Act.

General.—If persons who intend occupying factory premises were to seek the advise of the Department a great deal of expense, inconvenience, and loss of time would be eliminated. They go into occupation of unsuitable premises, then make an application for registration, and then wonder why all the necessary instructions are issued to conform to the requirements of the Act.

Mr. Inspector Henstock reports :—

Registrations.—A large number of new registrations were made during the year, in addition to transfers through change of occupiers. Several new factories have been constructed, chiefly in the Surry Hills area. Excellent welfare provisions have been made, and a much improved standard of sanitation. A large modern factory has been erected for the manufacture of hats. Other industries include printing and cardboard box making, brooms and brushes, also leather goods, and a new industry for the manufacturing of phonograph records.

Structural Alterations.—Rebuilding of many city factories has become a necessity. More room must be made for additional machinery and workroom space. Architects and builders, in most instances, had to face the difficulty of reconstruction whilst the industries were being carried on. As a result of these extensions, ventilation and lighting have been much improved, and another result is that several factories now have roof accommodation for dinner-hour recreation and dining facilities.

Fencing Machinery.—Careful attention has been given to this important work. There is always the necessity for supervision, but it is satisfactory to find that makers of new machinery are giving increased attention to safeguards as a structural part of the machine. This may arise from the increased interest taken in these matters by accident insurance companies, and it is a practice which can well be extended.

Accidents.—In most instances accidents reported were not serious, and no fatality occurred in my district during the year.

Fire Escapes.—In conjunction with Fire Brigade Officers provisions were made for a number of fire escapes in new factories and additional means of escape provided owing to extensions and remodelling. With the limited space in city factories, close attention has to be given to prevent obstruction in the means of exit. Instructions have also been given to occupiers to effect repairs and paint the iron stairways.

Bakehouses.—Bakehouses have received constant attention, and a number of improvements have been made. Two large city companies have remodelled their premises with much-needed improvement.

Limewashing has been generally observed, and special attention given to maintaining in good order the fly-wires on doors and windows. Substantial alterations were made to a suburban bakehouse.

Certificates of Fitness.—This section of the Act has to be always under observation. Several notices have been served on occupiers, who usually comply at once and obtain the certificate.

General.—Examination of boiler certificates show that the regulations in this respect are being well observed.

Mr. Inspector Jackson reports :—

Registrations.—Many registrations were made owing to change of occupiers. There were also a considerable number of new factories registered.

Structural Alterations.—I did not find it necessary to order any structural alterations in my district during the year.

Sanitation.—There are still many factories in my district using the pan system. One occupier, a tanner, informed me that there was a movement on foot to compel him to vacate his premises on account of the place being considered a nuisance; but when he had sewer connection made the cause of complaint was removed, and the agitation for his removal ceased. I issued instructions in many cases for the thorough cleaning up of premises.

Fencing of Machinery.—This matter had due attention, and many occupiers were given instructions in the way of fencing and guarding the machinery in their factories. One occupier informed me that a stronger guard on an emery wheel ordered by another inspector probably saved the life of an employee, as the stone burst at a later date, and it was only the strong guard that saved his life.

Fire Escapes.—In the city area I have found that this needs constant care. In the case of two factories owned by the same person the means of escape in case of fire had been altered and rendered ineffective, without the consent of the Fire Brigades Officer or the Factory Inspector.

Bakehouses.—This class of factory has generally been kept clean and well up to the standard of requirements.

Accidents.—The number of accidents during the period under review was comparatively small, and no fatal accidents occurred.

Certificates of Fitness.—In very few cases have I found boys under 16 years of age working in factories without their medical certificates of fitness, but some occupiers of small factories stated they were unaware that this was necessary.

Mr. Inspector McEvoy reports :—

Registrations.—During the year registrations in my district numbered 240, the greater portion being caused through change of occupancy of premises; cancellations numbered 168.

Structural Conditions.—I found premises generally in a fairly satisfactory condition. In a few instances I had alterations carried out to bring premises within requirements of the Act. Premises were taken for use as a bakehouse, and application made for registration of same. Inspection disclosed that the premises were unfit for bakehouse purposes, and the estimated cost of repairs, &c., was so high that the applicant decided to remove to suitable premises. After the erection of a seven-storey building in the heart of the city, upon application to register portion of premises as a factory, it was found that a fire-escape had to be provided before rooms could be used for factory purposes. With the exception of over-sight of fire-escape the building fully complies with requirements of the Act and Regulations. This is another illustration of the necessity for submitting plans to the Department before erecting buildings to be used as factories.

Sanitation.—In the city and in suburbs where the sewerage system is installed fairly good conditions are maintained; but in suburbs where the pan system operates constant supervision is required with respect to the closets. The standard of cleanliness of premises on the whole was fairly satisfactory.

Fencing of Machinery.—Constant attention was given to this important requirement of the Act. I experienced but slight opposition by employers in carrying out instructions to provide guards to dangerous parts of machinery, &c.; but more co-operation is essential on the part of employees in maintaining the fencing provided for their safety whilst at work. In one instance an occupier failed to carry out an instruction to securely fence a power press—an accident occurred later, and the employer was prosecuted and convicted and a fine imposed; also an accident at a mincing machine resulted in a prosecution and the employer being fined.

Accidents.—The number of accidents reported was small. The most serious occurred at a power-press, a planer, and a mincing machine. Two boys—one at a power-press and the other at a mincing machine—each lost a finger whilst operating these machines. Investigation of these accidents disclosed negligence on part of employers. Prosecutions, as mentioned above, were instituted against employers and a penalty imposed by the magistrate. In a joinery works an employee lost three fingers through foolishly stretching across the hood-guard on planing machine and attempting to take a length of wood from table; he overbalanced and his fingers came into contact with the knives.

Overtime.—The amount of overtime worked was limited. The overtime clauses of the Act were well observed.

Certificates of Fitness.—I found it necessary to direct the attention of a few employers to section 45 of the Act. Some employers are under the impression that this section operates only in respect to persons under 16 years of age who work on machines.

Bakehouses.—The bakehouses generally were well kept; but in a few cases the occupiers' attention had to be directed to unsatisfactory conditions.

Fire Escapes.—During the year notices were served on occupiers to repair stairways, also to keep passageways clear of all obstructions.

General.—Industrially I found conditions in the majority of trades somewhat slack. It is pleasing, however, to report that towards the end of the year employers generally appeared optimistic with regard to prospects during the year 1925.

Mr. Inspector Middlemiss reports :—

Registrations.—From January to the end of June I was engaged in the Newcastle area, being transferred later to the Metropolitan area.

Registrations in both districts under my charge were normal, there being little change throughout the year.

Structural Conditions.—The standard generally, so far as new premises are concerned, tends to improve, but cases were found where completed factory buildings did not comply with the requirements of the Act, and alterations were necessary. In my opinion the convenience of the public would be better served if additional authority made it necessary for plans of proposed factory buildings to be submitted to, and approved by, the Department.

Sanitation.—Conditions generally were fairly satisfactory, though attention may be drawn to the fact that at times when the number of employees is increased the question of the additional necessary sanitary accommodation—wash-basins, &c., is apt to be overlooked by employers.

With respect to ventilation many mechanical systems are being installed, in some cases because of special manufacturing processes, and in others to ensure a positive number of air changes in factory work-rooms.

Vigilant inspection has been directed towards ascertaining the degree of danger to health, or discomfort, attributable to any particular process, with a view to the Department securing the necessary authority to exercise any control deemed advisable for the well-being of the operatives.

In my opinion it is highly desirable that standards should be arrived at regarding air changes, as engineering science is now at such a stage that objectionable or unhealthy processes may be approached with a view to the *prevention*, rather than the cure of, ailments due to specific conditions.

Accidents and Accident Prevention.—I found it necessary to give strict attention to the fencing and guarding of general machinery. As a result of the establishment of higher standards of guarding, both here and in countries from which much of our machinery is still imported, manufacturers are, to an extent, incorporating guards in the design of certain classes of machinery. There are, however, many dangers incidental to the actual use of the machinery and conditions still obtaining that require constant inspection and supervision.

A careful analysis of the cause of a large number of accidents convinces me that only a small percentage can be directly attributed to lack of localised guarding, and that a very large number are due to conditions that inspectors have insufficient authority under the present Factories and Shops Act to adequately control.

The greatest effective force that an inspector can exert towards accident elimination is his ability to secure the co-operation of both employers and employees; this can only be effectively exercised through his technical knowledge and practical experience of the difficulties met with. In addition, a habit of caution on the part of operatives is an absolute necessity if many of the accidents are to be prevented, and it is in assisting in the cultivation of such a habit of mind that both with employers and employees an inspector has in my opinion an opportunity to carry on his most effective work. He would in such work be materially assisted by fuller authority designed to deal with the many new conditions that have arisen concurrently with our industrial development.

With respect to other concrete methods for the prevention of accidents, I would refer to my previous reports.

Fire Escapes.—In the Newcastle area the few fire escapes were found to be in a satisfactory condition. In one instance I found the originally registered premises did not extend beyond the first floor, but that as the business expanded the second floor had been occupied without any notice being given to the Department. Following my inspection an approved external iron fire escape was erected.

In another instance, in the Metropolitan area, I found that an approved fire escape (internal stairway) had been covered over with merchandise as a safeguard against burglary. Following my inspection the fire exit was made accessible.

Bakehouses.—I found the bakehouses under my supervision to be fairly satisfactory, although in the country districts some of the older existing buildings do not conform to the most desirable standard.

Overtime.—Only one breach of the Act came under my notice. The employer was warned.

Certificate of Fitness.—A number of employers were warned regarding breaches of Section 45.

General.—I would draw attention to the increasingly important work that factory inspection entails. In consequence of the rapidly increasing development of our industries, and the many new processes involved, with which it is necessary to keep closely in contact, the nature of the work, quite apart from the amount of it, calls for a continued growth and development on the part of the Inspector if he is to keep pace with the requirements. Matters often require the most careful consideration when in a more or less experimental state, because of their potential danger and in view of possible expansion in the particular industry. For this reason it is often necessary for an Inspector to anticipate possibilities, to be conversant with contemporary legislation, and with the results of the latest International experimental research work. It is necessary to view the work indicated as essentially of a non-routine nature, and as requiring the widest industrial mental outlook possible, so that light may be focussed from all angles on the many difficulties constantly arising in our industrial organisation.

Senior Inspector Miss Golding reports :—

Registration.—During this year there were more registrations of new buildings in my district than in 1923, several of which are equal to any in the Commonwealth. One, a straw hat and millinery factory, cost upwards of £30,000. It is four stories high, with a hot and cold water service on each floor, fine dining room, and every comfort for the employees. On each floor there is a fire sprinkler system.

Another fine new building is a photo-developing factory, four stories, with a flat roof, where employees can play various games in lunch hour. There is also a very fine ventilation system installed, and sprinklers in case of fire.

Many other fine factories were erected, all on the most modern lines.

Structural.—Many of the old factory buildings were remodelled and brought up to a more modern standard. Many of the work-rooms were enlarged, and where it could be done, more windows were put in, and the machinery placed in better positions and further apart, thus gaining more room to the operators.

Sanitation.—With the exception of the new and remodelled factories trouble is still experienced *re* sanitary matters.

In one factory I found 72 female employees using two W.C.'s On a previous visit 45 females were employed, and I had made arrangements for the use of a spare one on the next floor for the extra 13 girls.

On my next visit I found the above conditions; the girls had not been permitted to avail themselves of arrangements made. Action was taken for breach of Regulation 15, and a fine of £5 and costs resulted.

In a suburban factory I found that wash-basins were not provided for either sex. After serving two notices on the occupier to provide same a letter was sent in stating that an enamel bath with hot and cold water taps had been provided. On visiting I found an old bath used for trade purposes, which trade required hot and cold water, and had been used for years for this purpose. The occupier was prosecuted for breach of Regulation 16, and a penalty of 40s. with costs was imposed.

In another Suburban factory where over 60 men were employed, one wash-basin had been provided, The women were also one basin short.

In an enamelling factory a long iron trough with three taps had been provided for female employees to wash in. I had these conditions altered, and now there are six nice enamel basins installed.

Overtime.—If overtime is an indication of prosperity, then 1924 was most prosperous in various lines, particularly in the printing trade, also in the laundries.

In two printing factories warned by me verbally, and departmentally by letter, on my next inspection I found most excessive overtime had been worked, 3½ hours and 5 hours, none of which had been notified. Action was taken in several cases; 20s., 40s., 60s. and costs were the fines imposed.

Young boys and girls under the age of 16 years had worked above overtime, and in some cases had worked through from lunch hour, 1·15 p.m., to 9·15 p.m., without a break for tea. A fine of 40s. was inflicted.

In an enamelling factory I found women working 4 hours overtime, and four times in succession.

Certificate of Fitness.—During this year I found the same carelessness or evasion *re* obtaining certificates as in previous years.

In one factory I found 5 boys without certificates, 1 of whom was under the age of 14 years. The Department took action, and fines were imposed.

In another, 5 girls and 1 boy. In many factories from 1 to 3 without certificates.

Some employees appear to have a total disregard for section 45 by the number of children found without their certificates.

In the issue of permits to children under the age of 14 years, some have been recommended on account of the extreme poverty in the home, and where there is a father out of work, as in these cases, assistance is not given by the Child Welfare Department.

I had 2 cases to report on where the girls were only 13 years and 1 and 2 months old. In both cases the Minister for Education had exempted them from further attendance at school; both children were delicate looking and undersized. Their mothers were deserted wives. I interviewed the Welfare Department, and got a continuance of the State allowance of 10s. per week, the exemptions being withdrawn.

General.—On the whole, I have found factories kept more up to the standard in regard to lime-washing, scrubbing, and keeping the workrooms well swept; yet there were many exceptions.

One factory was in such a disgraceful state—floors, walls and windows—that it was surprising that men and women would work in it.

The Department prosecuted, and the occupier was fined £5 and costs.

Only in certain lines did I find slackness of employment; that was in small knitting and order-tailoring workrooms.

Senior Inspector Miss Harriott, B.A., reports :—

Registration.—The new factories registered in the district under my charge during the year include a woollen mill and three premises registered for the manufacture of electric appliances used in connection with wireless installations.

A firm employing 60 women in the manufacture of electric meters moved into a large new factory in the district.

Structural Alterations.—Minor structural alterations were carried out in a number of cases and improvements effected. A printing firm ceiled the iron roof of a workroom, and by this means reduced considerably its temperature.

The heat arising during the summer months from the sun's rays shining on roofs of unceiled iron is in my opinion often a hardship to the workers.

Sanitation.—On the other hand, complaints were made to me by employees of the low temperature in a photographic dark room during the winter months. Conditions were made more comfortable by the provision of electric radiators.

In fruit-preserving factories the steam arising from the exhaust steamers used in the cannery process is a constanee souree of trouble. On dull days when excessive moisture in the air prevents evaporation the employees work in a cloud of steam.

In one factory in the district, conditions have been greatly improved by the provision of large hoods and flues over the steamers and by increasing the ventilation in such a way as to cause a strong upward current of air.

Overtime.—Three applications by firms for extension of overtime were granted. On the whole however, the amount worked by women during the year was not great. The decrease in the number of nights worked in the clothing trades is noticeable.

Certificates.—Five applications for permission for girls under 14 to work in factories were investigated. In 3 cases permission was granted. Several certificates came under my notice issued to young persons suffering from physical disabilities, such as defective eyesight or heart trouble. In these cases it is usual for the certifying medical officer to note on the certificates conditions of employment, and it is the responsibility of the inspector to see that these conditions are complied with.

General.—A girl employed in a drug factory complained to me of illness, following the bottling of a certain aniline derivative known as amidol.

At my instance she was examined by the medical officer of Industrial Hygiene, who gave it as his opinion that while no definite evidence of chronic poisoning was shown, she had evidently suffered ill effects from the inhalation of the chemical.

Amidol is an extremely light powder, which has an irritating effect on the skin, and stains it black.

A certain amount was inhaled during the bottling, which was done in a crude manner. The work, however, is not continuous, only being done for a few days three or four times a year.

The firm is now improving the method of packing, and has provided the employee with long-sleeved overall and gloves.

The manufacture of fancy articles from celluloid, claimed to be an industry new to the State, was started in the district during the year. The celluloid is imported in sheets and shaped into frames for mirrors, clocks, &c., in the factory. Numbers and letters to be used on index boards in the entrance halls of business chambers are also manufactured from the celluloid.

Inspector Miss Brown reports :—

Registrations.—During the year registrations in my areas were numerous, mostly re-registrations of previously occupied premises, some being substantially remodelled and altered to satisfy present standards. Some were new buildings specially constructed for industries to be carried on—one, a suburban boot-factory, another a cereal food factory, were replete with all requirements. In another, a brush factory, the whole building, comprising three floors and basement, was completed without one ventilator being included as prescribed either for inlet or outlet of air; this was remedied by my instruction.

Structural Alterations.—Several necessary orders were served for minor alterations, principally in connection with extra sanitary conveniences and reconstruction of stairways. In one iron foundry it was necessary to have the brick floor, which was very uneven, concreted so as to provide more even surface surrounding the machines where the girls were employed.

Sanitation.—As a result of past work I had the satisfaction of finding much improved conditions *re* observance of cleanliness generally, and in several factories permanent cleaners are now engaged, but in some cases instructions *re* same were necessary, and were complied with readily enough. Similarly, orders *re* limewashing of premises were served. Some occupiers seem to consider it unnecessary to attend to that requirement of the Act unless ordered by the Inspector.

In one city factory I found that it had been the practice of the forewoman to lock the lavatory and W.C. doors for half an hour or more before ceasing time each evening, evidently with the intention of preventing the girls concerned from changing their clothing, &c., before specified time. The manager assured me that it was done without his knowledge or authority, and ordered it to be discontinued at once. This explanation was accepted by the Department, and a warning letter was sent.

Overtime.—A fair amount of overtime was worked, within prescribed limits, during the year. In an inspection at an old-established millinery factory I found that considerable overtime had been worked by various staffs and no notice of the working of same had been sent to the Department. Action was taken and a substantial fine inflicted. Four applications for extensions of overtime were investigated, all from printing factories, the facts elicited showing justification and that extra employees were unobtainable, each was granted by the Minister.

Certificates of Fitness.—Although this section of the Act is now more generally observed, breaches are still detected, and in some cases proceedings were taken by the Department. I made investigations numbering about 15 under Section 40, for certificates for children under 14 years of age to be employed in a factory; of these, 2 were withdrawn by the parents and in 2 other cases the exemption certificates issued by the Education Department were cancelled; the balance, showing stress of circumstances, were granted.

Laundries.—Conditions were fairly well maintained in laundries in my districts. Cleanliness is usually well observed, and where limewashing orders were served they were complied with promptly.

General.—In many industries visited employment was evenly maintained; but in some, notably boots and shoes, order tailoring, dressmaking, and some knitting factories, work was intermittent. Fortunately for female employees concerned more industries are opening up requiring their services, and many girls now follow seasonal occupations. One girl recently told me that she is usually engaged in the making of eiderdown quilts, and she wanted to learn chocolate-dipping to occupy the balance of the year.

Welfare Work.—Most occupiers are providing some degree of extra comfort for their employees, even in quite small factories. I would like to see more co-operation by employees in the maintenance of same. In one factory recently visited I found a large-sized circulating library established free of cost to employees, a junior of the firm acting as librarian. At the same factory, where a bonus is paid weekly in addition to award rates, a thrift club has been organised, voluntary contributions; savings this year amounted to £1,611 odd; savings may be withdrawn near end of year or left standing, adequate rate of interest being paid by firm. A real system of helping others to help themselves. At another factory, which is one of several controlled by the same owner, every employee in each factory was given ten days holiday over Christmas period on full pay, which, I am informed, involved an expenditure of over £7,000.

Miss Inspector Scobie reports :—

In making a survey of work done during the past year, one finds it somewhat difficult to detach from the rules of routine work, none the less important on that score, matters of outstanding note.

Registrations.—At the commencement of the year I visited, in company with the Superintending Inspector, a new six-storey building valued at £80,000. In viewing the premises, prior to completion and registration, I pointed out to the owner that the requirements of the Act had not been complied with in the matter of lavatory ventilation. I also drew attention to the unsafe stair-rails, and suggested that the openings between the rails be wire-netted. I was thanked for the suggestion, which was ultimately put into effect. Had the plans, in the first instance, been submitted to the Chief Inspector for review, much extra cost might have been obviated.

In registering new buildings, or re-registering premises previously occupied as factories, a closer co-operation with the local sanitary authorities is much to be desired, and would eliminate much needless inconvenience and additional expense.

Structural Conditions.—Quite a number of structural alterations were commenced in the area under my supervision during the year. In one or two instances these alterations, when completed, will make possible the reorganisation of working conditions. This applies more particularly to a factory in which a high percentage of juvenile labour, of both sexes, is employed, and where hygienic conditions were far from satisfactory at the close of the year.

Hygiene.—When one compares the workrooms in the city of Sydney and its environs with those of an inland city, such as Goulburn, one is confronted with an entirely opposite set of conditions. In the former case we are chiefly concerned in seeing that temperatures in workrooms do not rise above normal. Whereas in the latter case one recognises how essential heating appliances are. I found in Goulburn that every workroom had to be artificially heated, either by means of a fuel stove, or, as in one boot factory employing 38 women, by means of electric radiators, placed at intervals under the machine benches.

Sanitary conditions call for constant supervision in order to maintain a standard in conformity with present-day requirements. In this connection it is only fair to add that a greater responsibility might and should be assumed by employees generally, in whose interests these standards are set up.

On the question of ventilation much remains to be done, especially in many of our unscientifically constructed laundries. The unhygienic conditions prevailing in some laundries becomes apparent when contrasted with others, wherein some thought and skill has been exercised.

Overtime.—During the year I made investigations in connection with 6 applications for extension of overtime. In 2 cases the extension asked for included overtime worked on Sunday. All applications were granted.

Certificates of Fitness.—Notwithstanding the care exercised by employers generally, in requiring children under 16 years to produce their certificates of fitness, before accepting them for employment, it is a daily occurrence to find some employers careless in this regard.

During my visit to Goulburn recently I inquired from the forewoman of a factory employing between 30 and 40 women, why certain children were without certificates. She informed me that when parents were unable to pay the necessary fee to have their children medically examined, she allowed the children, before sending them for their certificates, to earn a few weeks' wages in order to pay the fee.

The manager of another firm informed me that under similar circumstances the firm paid the requisite fee.

General.—At the urgent request of the Executive of the Health Week Campaign, and with the concurrence of the Department, I organised a team of speakers to give luncheon-hour addresses, during the period, on industrial hygiene. In most cases the addresses were given in those factories where women employees predominated. A number of prominent medical practitioners co-operated, also officers of this Department, and their addresses were appreciated both by employers and employees.

Following upon investigation I found it necessary to instruct two large city restaurants to provide additional dressing room accommodation for their female employees.

Inspector Miss Stuart-Robertson reports :—

In addition to periodically inspecting all factories in the Metropolitan district over which I had supervision I made two inspectorial tours of Newcastle and district.

Registrations.—One hundred and sixty applications for registration were attended to by me, and in many cases I found it necessary to issue instructions to have the premises brought to the standard required by the Act.

Structural Conditions.—The old unsatisfactory premises are slowly but surely disappearing. The remodelling of several large buildings previously used for other business purposes has been a forward move in factory premises. Several fine buildings have been erected and fitted with all modern conveniences. In most of these several factories are housed and as the workrooms are large the more congested areas have been much relieved.

One large building in which several small factories carrying on the dressmaking industry are housed is situated close to Hyde Park, a close view of which can be obtained from the workrooms, and the value of the air from which cannot be over-estimated. In this building also hot as well as cold water is supplied to the lavatories. A receptacle for scraps of all kinds from the workrooms is provided, and automatically conveyed to an incinerator. The value of this installation is greatly appreciated by the occupiers.

I was called upon to inspect one new building prior to occupation, and I found that no permanent ventilation was provided. After consultation with the architect this was remedied by louvered openings being placed in the upper portion of the windows.

In the centre of the city an arcade was entirely remodelled, and every available workroom was quickly occupied.

Sanitation.—In the new buildings this matter has been well attended to, except in isolated cases of insufficient ventilation, but in the old buildings constant and untiring supervision has been necessary. In Newcastle I found many faulty sanitary arrangements. Progress in sanitary conditions in this city is very slow. I reported several breaches in connection with sanitation, and action by the Department has had a good effect.

Overtime.—A considerable amount of overtime has been worked and with but a few exceptions in strict accordance with the Act. In a large jewellery factory I found that excessive overtime had been worked, which had not been notified, and no tea money had been paid. Legal action was taken in three cases which resulted in conviction in each case, and substantial fines were imposed. In a suburban confectionery factory excessive overtime was worked. The occupier was prosecuted and heavy fines were inflicted.

Certificate of Fitness.—The obtaining of this very necessary certificate has been fairly well observed. In no case have I found a certificate refused on the ground of physical unfitness; the girls being generally healthy and well developed.

General.—I have found a gradual improvement in factory conditions generally. In most of the large factories I have found ample provision made for medical attention, and a sympathetic matron to attend in cases of slight sickness or small accidents.

Employment for women and girls has been fairly well maintained. Employees in the shirtmaking industry have suffered most.

Inspector Clark (Newcastle) reports :—

Registrations.—Again I have to report an increase in the number of factories registered during the year. Included in number is one at Waratah for the manufacture of wire rope, which is the first of its kind in this State, and which adds another link to the chain of industries established in this district in the Iron and Steel Industry.

Structural Conditions.—The tendency in this direction is towards a much better standard. In the erection of new factories more attention is now paid to the requirements of light, ventilation, and sanitation, and the advice of the inspector is more often sought in this connection than has been the case hitherto.

Fencing Machinery.—In this connection considerable advances have been made in the securing of a higher standard of guarding dangerous machinery. More attention is being given to the disposition of the machines throughout the factory, giving ample room for traffic ways for the employees in the performance of their work. These conditions lend themselves to a higher and more efficient standard of guarding. Much however remains to be done, as many factory occupiers do not seem to realise that they have a personal responsibility in securing an observance of safety first principles, by themselves and by their workmen. Constant visitation is therefore necessary to impress and emphasise upon all concerned the importance of this side of factory working.

Accidents.—Of the accidents reported which come within the provisions of Section 38 of the Act, by far the greater number come under the heading of minor casualities. These were mainly confined to the wood-working industry and seem to be an inseparable part of the working of this industry, despite the many achievements of science in the direction of safeguarding the dangerous parts of the machinery in use therein. In one or two other instances accidents of a more serious kind occurred—one in which a young girl working in a laundry inadvertently permitted an article of clothing which she had in her hand to be caught on the back roller of a calender machine, and had her hand drawn in before the machine could be stopped. This accident necessitated the amputation of all her fingers of one hand to the second joint. The machine at the time was not guarded at the point of contact, as it was considered to be a remote danger point, but has since been done.

In a joinery works the belt of a double headed spindle moulder broke at the metal fastening, which became detached. In its flight it struck the head of a workman some distance away, and inflicted a serious injury. The belt was almost new, in good order, and there seemed to be no apparent reason for the break to occur in the way that it did.

Fire Escapes.—One new fire escape was erected in my district in accordance with the recommendations of the Officer-in-Charge of the Fire Brigades. The existing escapes have had the necessary inspection and attention.

Overtime.—No overtime has been worked during the year, except in the period before the Christmas Holidays when the usual seasonal rush in the Clothing Trades Industry was experienced. In each case the provisions of the Act and the Regulations have been observed.

Certificates of Fitness.—Except in some isolated instances due regard has been paid by factory occupiers to the requirements of the law in this respect. Continued disregard in some cases necessitated proceedings to impress on occupiers the obligations imposed by the law.

Bakehouses.—Many of the bakehouses are well kept, but, as in other phases of industrial life, there are always some to be found who have to be continually told that it is necessary to keep these premises clean and wholesome. The standard of bakehouses structurally is improving, the old and obsolete structures disappearing to make room for modern buildings, which will make for better hygienic conditions.

Boiler Regulations.—Attention to this matter is now generally given by occupiers of factories, very few instances coming under notice during the year wherein neglect has been shown. The instances that have occurred of failure in this respect have been confined to bush sawmills in isolated centres far removed from railway communication.

Mr. Inspector Armstrong (Newcastle) reports :—

The district under my control for the year 1924 was towards the latter end of the year extended by the addition of the South Maitland coalfields area, and to include such important industrial centres as Cessnock and Kurri Kurri. An especially fine and modern bakehouse, equipped with most up-to-date machinery, tiled walls, and perfectly ventilated was recently opened at Cessnock, the comfort and convenience of the employees receiving every consideration, even hot and cold showers being provided. It is to be regretted, however, that factory occupiers, as a rule, do not acquaint the Department with the fact that they intend to build or purchase new premises, as the requirements of the Act could be provided for far more economically at an initial cost than after the completion of the buildings.

Registrations.—A considerable number of applications for registrations were dealt with during the year, the majority, however, being the result of established businesses changing ownership. About a dozen new sawmills were registered, and, judging by the activity in the industry, it might reasonably be suspected that more mills will commence operations in the near future.

Structural Alterations.—Except in the case of lavatory accommodation, it was not necessary for me to issue any instructions respecting the structural conditions of any premises.

Sanitation.—I found it necessary to serve notices upon many employers to limewash and keep premises in a more cleanly condition.

Fencing and Guarding of Machinery.—Although occupiers generally have provided guards for most machines. I have often observed when entering premises that the safety appliances have either been removed from the machines or rendered temporarily ineffective. On pointing out to the occupier his obligation respecting the sections of the Act dealing with the guarding and maintaining of guards of machines, I invariably receive the reply, that once the guards have been provided the employees in their own interests should not interfere with them, or when it is occasionally necessary to remove the guard temporarily that the employees should as soon as possible replace them. Although this may seem logical reasoning, it often becomes a task to convince occupiers that the onus of maintaining the fencing and safeguards is upon them. It might be opportune to state here that considerable opposition is still shown to the use of a riving knife on the ever dangerous circular saw.

Accidents.—The number of accidents reported during the year was slightly more numerous than during the previous year. I am glad to report, however, that no fatal accidents occurred in my district. In fact, except for an isolated case, all accidents were of a minor character. A girl employed attending a calender roll had her hand drawn in the rollers, owing to a tape from a pillow slip winding round her finger. Although the machine in question was guarded, it was found that the employee's hand had been crushed when a child, and was abnormally small, thus allowing her hand to be drawn further into the machine than would have been the case with a normal hand. Fortunately no amputations were necessary as the safety rail operated when the heel of the employee's hand contacted with the rail.

A sawyer in a large country mill in attempting to loosen a nut holding the fence slipped, and his hand contacted with the saw, resulting in severe lacerations and the loss of three fingers.

Circular saws, a wire stitching machine, and a bottling machine were responsible for the other accidents reported.

Overtime.—Very little overtime was worked during the year, the only periods worthy of mention being prior to Easter and Christmas vacations. Even then it was restricted to the clothing and millinery industries, and I am satisfied that had the required labour been offering at the time, employers would rather have increased their staffs in preference to working overtime. The restrictions and provisions of the Act respecting overtime were faithfully observed in all cases brought under my notice.

Fire Escapes.—No new buildings were erected in my district during the year in which it was necessary to erect fire escapes.

Certificates of Fitness.—It is still necessary to draw employers attention to the provision of section 45, but generally speaking certificates of fitness are demanded before employment is offered.

Bakehouses.—It is pleasing to note the much improved style of bakehouses being erected compared to those which have been in existence for years, and much satisfaction has been expressed both by employers and employees from an economical and hygenic viewpoint. Of the many older bakehouses remaining continual vigilance on the part of the inspector is necessary. Generally speaking, however, occupiers of bakehouses are fairly sincere in their endeavour to maintain a reasonable hygienic standard,

General.—No new industries were commenced in my district during 1924.

Factory occupiers as a whole seem ready and willing to remedy any defects pointed out by an inspector, and endeavour to carry out the provisions of the Act.

The industrial position, especially in the country portion of my district, showed far more activity than during the previous year, and, on account of the bounteous winter rains, a busy and prosperous 1925 is anticipated.

Mr. Inspector Darbon (Newcastle) reports :—

At the beginning of the year I was given charge of that district which comprises the greater portion of the Western Suburbs, and in June was transferred to Newcastle, taking over the district recently supervised by Mr. Inspector Middlemiss.

Registrations.—A number of factories were registered in my district during the year, but for the most part were for small undertakings, or merely changes of occupiers.

Sanitation.—Factory occupiers generally kept their premises in a cleanly condition, but a number of cases were met with which rendered it necessary to issue instructions to maintain the required standard.

Fencing of Machinery.—During the year I was invited to sit with the Departmental Machinery Committee, and assisted in devising and experimenting with new guards.

In the course of making inspections, I found it necessary to draw the attention of a number of occupiers to the improved standard of guarding required by the Department, and was able, personally, to assist certain occupiers to guard machines set up for special work.

Fire Escapes.—Whilst in the city area the matter of alternate means of escape in case of fire was given constant attention, and on a number of occasions where premises previously used for other than factory purposes were taken over by factory occupiers, the assistance and co-operation of the officer of the fire brigades had to be sought to devise ways and means for bringing the premises into full conformity with the Act.

Structural Conditions.—Only in one case was it found necessary to make drastic demands upon the owner of factory premises so that the required standard should be maintained. No difficulty was encountered in getting the required alterations carried out.

Accidents.—A large number of accidents were reported, which upon investigation were found to have been caused for the most part by want of forethought in not having machine guards properly affixed.

In one of the larger factories in my district accidents were fairly numerous, several proving fatal, but these were not under Section 38 of the Act.

Bakehouses.—The majority of bakehouses were kept in a satisfactory condition, except that the usual notice to limewash had to be served on a number of occupiers.

Certificates of Fitness.—In a number of cases I found it necessary to issue instructions to occupiers to obtain certificates of fitness for persons under 16 years of age.

General.—Several of the larger industries in my district are well on the road to recovery after a prolonged depression, this being evidenced by the fact that in a number of cases the plants are being extended. A large cement works with a modern and well equipped plant is nearing completion. This factory will, it is anticipated, make employment for a large number of men.

Mr. Inspector Ogilvie (North Coast) reports :—

Registrations.—A large number of registrations were dealt with during the year, chiefly from occupiers of bakehouses, motor engineering works and sawmills.

Sanitation.—In one factory separate w.c. accommodation was not provided for the male and female employees. The attention of the occupier was directed to the matter, and separate accommodation was provided forthwith.

The problem of the satisfactory disposal of sewage is one that sooner or later is bound to engage the attention of those who are entrusted with the welfare of the people of our unsewered country districts. In some of the main towns in my district factory occupiers have considered it advisable to have properly constructed septic tanks installed at their factories. These are far in advance of the pan system, and in my opinion the best offering at the present time. The pan system cannot be regarded as satisfactory where a number of persons use them daily. If the septic tank is properly installed it would work out at a saving, as sanitary rates and disinfectants are thereby saved.

In view of the suggested amendments of the Factories and Shops Act, 1912, might I be permitted to suggest that in factories where the pan system is in use a properly installed septic tank system be made a matter for consideration.

Fencing of Machinery.—Attention was given to the efficient fencing of dangerous machinery, but I experienced some trouble by reason of employees who frequently remove guards or do not see that they are properly adjusted when changing the operation. The chief offenders were employees in the woodworking industry.

Fire Escapes.—There is only one factory in the district that required attention in this regard, and the provisions of the Act are complied with.

Accidents.—At one of the sugar mills an employee had his right arm torn off a few inches below the elbow. The accident was not witnessed, but it is believed that the employee was running a belt on to a pulley when his shirt was caught. Several employees heard his cries and rushed to his assistance. When found he was walking down a flight of stairs coming towards his comrades. All his clothing, except his boots and socks were torn off, in addition to the loss of his arm. A number of his ribs were broken. A few years ago the injured person lost his left arm whilst working machinery in another State. This arm was severed above the elbow, and he was endeavouring to support his right arm with this stump when his mates found him.

At a sawmill an employee was attending to the underpart of a steam driven winch when another employee ignorant of the other employee's position started the winch, with the result that the employee's arm was caught between one of the cogwheels and the bottom frame of the winch and torn off at the shoulder.

Overtime.—One application for an extension of overtime was dealt with, and, in view of the circumstances surrounding the case, the application was granted.

General.—A number of the sawmills in the district have closed down, and many will not probably start again for some months. This state of affairs is due to a great extent to the keen competition of American oregon and other imported timbers. Mill owners find it unprofitable to keep going, and the result is that a large number of timber workers are out of employment.

During the latter end of the year the turbines were started running of the largest water-power scheme on the mainland of Australia. It is the Nymboida Hydro-Electric Seheme, which has been carried out by the Clarence River County Council.

Developing 2,000 h.p., it will supply Grafton, South Grafton, and Ulmarra with light and power, and Maclean lower down the river will link up with the scheme shortly.

Up in the hills, 27 miles from Grafton, the Nymboida and Orara rivers run parallel to each other, the Nymboida being in a valley 22 feet higher. The waters of the Nymboida have been banked up by a weir, ensuring a continuous flow through pipes which carry the water to the power-house below, where after doing its work the water passes to the Orara river.

Current is carried by transmission lines to Grafton, South Grafton, and on to Ulmarra, the latter town being 36 miles from the power-house. Current is also available to farmers along the river.

Mr. Senior Inspector Burkitt (Tamworth) reports :—

Registrations.—At the end of 1924, 588 factories were registered in this district, showing an increase of 39 over the previous year. As usual a number were re-registered on account of change of occupiers or of locality, but 54 new ones were added and 15 cancelled, two of the latter having removed to an adjoining district and registered there.

Inspections.—Travelling by car I have been enabled to cover the whole of my district once during the twelve months, including several places where factories have been operating for some years but had never been inspected. A second visit, by train, has been made to the main towns only. It is a matter for regret that it is found impracticable for outlying factories in the country to be inspected twice a year. New machinery is sometimes installed, and if found to be unguarded it is no uncommon thing for the occupier to explain blandly that he was waiting for the inspector to show him how to do it. Again, guards put on in good faith are not always efficient. Two of such cases recently came under my notice. I had ordered guards for circular saws twelve months before and had given the occupiers full information and sketches. Upon my return I found that they had been procured from long distances and placed in position, but, owing to slight defects in construction, were by no means effective.

General Conditions.—At the factories hitherto uninspected the occupiers generally professed total ignorance of the requirements of the Act. They included forest sawmills, travelling chaff-cutters, bakehouses, &c., and, as is usual in such cases, my visits were none too soon. The machinery was generally entirely unguarded, a number of the boilers had not been inspected, and some of the bakehouses were of the most primitive construction, with floors of beaten ant-bed. With the exception of the above, occupiers have, for the most part, evinced a desire to adhere to the law. Machinery guards have usually been found to be maintained in an effective condition, and lime-washing, painting and cleaning have been attended to with such regularity that I have not found it necessary to report any serious breaches of the Act.

Prosecutions.—For breaches of the Boiler Regulations proceedings were taken, and convictions secured in four cases. In one instance the occupier had been written to by the Department, but had failed to have the inspection made, and in the other three the inspections were much overdue. The occupier of one of these, a travelling chaff-cutting plant, was also proceeded against for failing to keep a record of employees; and in each case he pleaded not guilty on the ground that in his opinion, and that of his advisers, his plant, which had, however, been registered for some years, did not constitute a factory within the meaning of the Act. The magistrate, however, after adjourning the case for fuller consideration, decided to convict, and fines were imposed for each offence.

Accidents.—Only two accidents were reported, both of which occurred at sawmills. In one, an adult employee lost portions of two fingers through attempting to adjust a four-sided planing machine, which was effectively guarded, while it was in motion. The other, also an adult, had the top joint of his thumb cut off while working at a circular breaking-down or "spotting" saw, which was provided with an approved guard, consisting of a riving-knife and hood protecting the back and upper portions of the saw. The teeth at the front were necessarily uncovered, and it was at this point that the accident occurred. Very few females or youths are employed in factories where machinery is installed throughout the district, which accounts partly for the very few accidents reported.

Fire Escape.—The only fire escape certificate issued was in the case of a large new flour mill, wherein due provision was made to meet the requirements of the Act when the plans were originally prepared.

Certificates of Fitness.—At a few factories I found boys under 16 years of age, who had been employed for short periods without certificates of fitness, the employers having failed to realise that such should be obtained even though the boy is only on probation.

Mr. Inspector Waugh (South Coast) reports :—

Registrations—During 1924 a fair number of registrations were effected, the bulk of these being through change of occupiers.

Sanitation.—Sanitary conditions still maintain a fairly high standard, but occupiers of smallgoods factories have constantly to be reminded to keep their premises in a more cleanly state.

Fencing Machinery.—A marked improvement is noticeable in fencing and guarding machinery, but bush sawmills owners are somewhat neglectful in fencing and guarding, and when reminded they try to place the blame on their employees.

Accidents.—No fatal accidents through machinery occurred in my district during 1924, but one man died from the result of an accident received through falling upon his tucker tin when on his way to work. A large number of slight accidents were inquired into.

Bakehouses.—The old type of bakehouse is gradually disappearing, and where it is possible to obtain brieks a much improved building is erected to conform with the requirements of the Act.

Certificates of Fitness.—No trouble is now experienced with the occupiers of factories in respect to obtaining certificates of fitness for boys under 16 years.

Boiler Inspections.—The only persons who are neglectful in having their boilers inspected are owners of sawmills in distant parts of the bush, and their excuse is that the boiler inspector has not yet been on his usual rounds.

General.—During the year work in all classes of factories was fairly good, except at the Metal Manufacturers Pty. Ltd., Port Kembla, where there were at the end of the year 100 persons less employed than in 1923. However, the outlook for 1925 is good.

Mr. Inspector Wallaee (South-Western), Goulburn, reports :—

Registrations.—During the year a large number of factories were registered, principally through change of occupancy. A fair number were cancelled.

Structural Conditions.—In several factories improvements were carried out, particularly with regard to rebuilding sections, ventilation and lighting; also two new bakehouses erected.

Sanitation.—A great deal of attention has been paid to this important part of the Act, resulting in a steady improvement throughout the district.

Fencing.—As will be seen by the number of instructions issued to occupiers during the year, it was necessary to continually enforce the effective fencing of machinery. A marked improvement in the safeguarding of employees has taken place generally. In two factories it was necessary for the Department to issue warning letters relating to the neglect to maintain guards in an efficient state.

Accidents.—I am sorry to report that three fatal accidents occurred at brickworks during the year. At Young an engineer was killed by being caught in the driving belt and hurled with terrific force through a partition wall of corrugated iron into the engine room, striking the main bearing pier. He received fearful injuries. The coroner's verdict was accidental death. The other two fatal aceidents happened at Bowral through a brick wall, 3 feet thick, falling and killing two men. Otherwise only a few accidents of a minor nature occurred during the year.

Fire Escapes.—This provision was satisfactorily observed.

Overtime.—Very little overtime was worked during the year, the governing seetion being well observed.

Bakehouses.—At Bombala and Lyndhurst new bakehouses were erected. As a result of negotiations arrangements have been made for the erection of another new bakehouse in lieu of a dilapidated building. Several instructions relating to improvements in lighting and ventilation were creditably carried out.

Certificates of Fitness.—In a few factories it was necessary to have the provisions of this section enforced.

General.—A large woollen mills at Bradfordville, near Goulburn, commenced operations in the manufacture of cloth. It is expected that an official opening will take place when all sections of machinery are in operation. This will be the first industry of the kind in the district.

There is a possibility of industrial activity in the Berrima district in connection with the erection of a large cement works. It is also proposed to commence the manufacture of patent rubber motor tyres at Goulburn shortly.

Mr. Inspector Davis (Southern District) reports :—

Registrations.—During the year under review I attended to a fairly large number of registrations and cancellations; the registrations, in many instances, being occasioned by the change of occupiers.

Structural Alterations.—I found the factory premises, generally, in fairly good order; therefore it was not necessary to recommend the issue of a Minister's order under this heading. Instructions were given in several instances to have concrete floors repaired and vents provided over ovens in bakehouses. The occupiers that received instructions in this direction readily complied with same, evidently realising the benefit to be derived upon completion of the alterations.

Sanitation.—With the exception of a few large towns there is no sewerage system in existence, consequently the pan system preponderates, occasioning constant supervision to maintain satisfactory results. On account of the removal service being conducted by the municipal and shire councils, the health officers devote a good deal of attention to this part of their duties, yet in a number of instances I have insisted upon more satisfactory methods being adopted. I think an adequate supply of dry earth, ashes, or other deodorising substance should always be available wherever the pan system is in use, with an ample supply also of a suitable disinfectant.

Fencing of Machinery.—Constant supervision is necessary for the fencing and guarding of machinery. Some occupiers of factories are inclined to become careless of their obligations in this most important feature of the Act. I have noticed several lathes installed in the country without being fitted with the

necessary guard for the gear wheels. Upon directing the occupier's attention to the existing danger, the employer readily acceded to my request to securely fence the dangerous parts of the machines. Several occupiers asked for advice in connection with later type guards, and were quite willing to accept the advice tendered by substituting the later type guard for the old one. (I might here mention that many occupiers of factories fully appreciate being furnished with a set of the departmental photographs of approved guards for various types of machines.)

Fire Escapes.—Alternate means of escape in case of fire have been provided where required. In a few instances instructions were given to remove obstructions from the passage-ways for the safe using of the escapes.

Overtime.—During the year I received only one notice of overtime being worked. The factory was closed for two days on account of the sudden death of the occupier, thereby affecting the output of orders to such an extent that it became necessary to work overtime on three nights to complete as many orders as possible in the time to be worked. Provisions of the Act and regulations were observed.

Bakehouses.—In a few of the outlying towns out-of-date structures are still in existence, but when the premises are frequently limewashed and the sanitary conditions attended to reasonable compliance with the provisions of the Act are maintained. The condition of bakehouses generally is fairly satisfactory.

Accidents.—I am pleased to report that very few accidents occurred in this district. There were, however, two accidents which I will refer to. A young man had the fingers of his hand severed whilst operating a meat-mincing machine. The meat was put through the machine with a coarse cutter affixed to it, and was then put through a second time with a much finer cutter affixed to the machine. When the last portion of the meat was in the hopper, the employee placed his hand low down in the machine with the intention of pressing the meat into the conveyer, and whilst doing so his hand was caught between the end of the conveyer and the inside portion of the machine with the above result.

The second accident occurred in a sawmill. The sawyer was cutting a piece of timber 11 ft. x 6 in. x 1 in. into 4 in. x 1 in. flooring boards. On account of a flaw in the timber it broke when the cut was completed. The lighter end of the timber fell on the back of the saw. It was caught on the saw and hurled to the front of the bench. The wood split into two pieces. One piece struck the sawyer's hand, causing slight lacerations, and the second piece struck his leg, piercing the thigh. The accident was occasioned by the riving knife affixed at the back of the saw not being sufficiently high enough to cover the periphery of the saw. Had the riving knife been of the proper height and correctly affixed to the bench, it would have prevented the timber coming into contact with the back of the circular saw. I caused an effective guard to be provided.

Certificates of Fitness.—In factories where persons under 16 years of age are employed, employers, as a rule, observe the certificate provisions of the Act; therefore, it was necessary in only a few instances to instruct the occupier to obtain certificates of fitness for all persons under 16 years of age.

Boiler Inspection.—Occupiers of factories using steam boilers or other pressure vessels were instructed to exhibit the certificate of inspection.

General.—Several instances came under my notice clearly indicating that occupiers and managers of factories are now giving more attention to matters involving the safety and well-being of employees.

Mr. Inspector Baker (Western District) reports :—

Registrations.—In addition to the alterations to the register caused by changes of occupancy, there were a number of new registrations added during the year, and in the more settled towns some very substantial buildings were erected for factory purposes, and some of these were occupied before the year closed.

Sanitation.—Considerable improvement has taken place in factory buildings in this district, due chiefly to the erection of new buildings and particularly to those built on plans that have been submitted to and approved by the Department.

Several of the towns are without brick works, and the cost of bringing such material by rail (in many cases long distances) makes their use for general building purposes almost prohibitive. The result is that many of the buildings are of wood, corrugated iron or plaster sheets, and therefore of a considerably lower standard than buildings of similar design built of brick or concrete.

Bakehouses.—Bakehouses in the district received attention, and where necessary instructions were given occupiers to limewash the walls and ceilings. In several cases I caused hoods to be provided over furnace and oven doors, with flues to the outer air. The results were quite satisfactory.

During the year due attention was given by me to the condition of work-rooms, and where necessary occupiers were instructed to limewash or paint inside walls and ceilings of their factories, lavatories, &c.

In addition to the above I have had special large ventilators affixed in the ceilings of some of the bakehouses. These vents can be opened or closed as occasion requires, and are chiefly installed for the purpose of reducing the abnormal temperature of the bakehouse during the baking period and particularly when a batch is being withdrawn from the oven.

On visiting a power-house (in course of construction) and on inspecting the plans of the building and the lay-out of the machinery I found that serious defects would exist, particularly *re* the position of the producer plants in their relation to the engine-room if the buildings were erected and the plants installed as shown in the plan.

I drew the attention of the persons concerned to these defects and informed them of the Act's requirements *re* the installation of producer plants in factories. The matter was gone into very closely by the persons concerned in the erection of the building and plant with this Department, and I am pleased to say that satisfactory alterations were made to the building and that it has since been registered.

I might also mention that in another large town I found (towards the end of the year) a power-house being built, the design of which was so bad, and contrary to the requirements of the Act in respect to ventilation and isolation of producer plants, that I at once drew the attention of the architect and builders to the faults.

Fencing of Machinery.—This important matter received my close attention, as in the past, and I am pleased to report that with few exceptions I found the fencing and guards being maintained and in good order.

I had occasion to warn one occupier *re* the unfenced state of his timber-cutting machinery, and had it not been for the fact that the plant had merely been set up temporarily would have recommended a prosecution for the breach.

I found two emery wheels (used for saw sharpening) so badly mounted that their use was highly dangerous. In addition to fencing and guarding of machinery, the no less important matter of proper mechanical means of control at engines, mill-gearing, and machines received close attention, and several gas and oil engines found to have been installed without such means of control were on my instructions so provided.

All occupiers of "small goods" factories using mincing machines were instructed to affix the approved type of guard at the machines.

Boiler Inspection.—Boiler certificates were examined at all factories employing boilers, and any necessary action taken. In the case of new registrations occupiers were instructed to have boilers inspected and to exhibit the certificate. Other pressure vessels also received attention, and the occupiers of several motor repair factories were instructed.

Accidents.—I am pleased to say that very few accidents were reported during the year. A bench-man at a bush mill when moving his hand across the front of the revolving saw-blade to adjust the gauge touched the saw-teeth and lost portion of four fingers of the left hand.

Several minor accidents when investigated were found to be not under Section 38.

Fire Escapes.—None of the factories registered during the year had workrooms above the first floor.

Certificates of Fitness.—On several occasions I found lads under 16 years of age employed in factories covered by Regulation 47, without certificates of fitness. In many of these cases the occupiers informed me that they experienced the greatest difficulty in getting lads, and that they frequently had to try out several before finding one that suited.

I might say that in no case did I find a lad being overworked, or employed at or near dangerous machinery. Their chief employment appeared to be running messages and cleaning the workshop.

One lad I found to be under 14 years, but he had been excused from further attendance from school. I warned each occupier, and instructed them to forthwith obtain the necessary certificate.

Overtime Restrictions.—Just prior to Christmas, I found that overtime had been started at a few tailoring establishments.

I had occasion to warn three occupiers for minor breaches, and one for having permitted two female employees to work overtime for more than three consecutive days, on two occasions. These employees worked two evenings at the factory, and on the two following evenings took work home. They received full award rates for the overtime, and also the award tea-money rate.

New Industries.—During the year the Parkes Municipal Council erected a large (brick) power station for generating electric light and power for the town. The current was switched on before the year closed.

An electric light and power station was almost completed at Dubbo, for town and general lighting and power purposes. This undertaking is by a private company.

The town of Warren was lighted by electricity during the year. This plant is the property of an individual.

Wellington Municipal Council made arrangements for the installation of electric light and power generators.

A company has decided to erect an up-to-date woollen mill at Orange. 13 acres of land, adjoining the railway line in Orange East, were secured. It is expected that the factory will be completed by the end of 1925, and will then employ about 200 hands.

Mr. Inspector Nolan (Western District) reports :—

The district embraces that portion of the west from Doonside to Bathurst, from Wallerawang to Coonabarabran, from Dubbo to Coonamble, and includes the Hill End, Rockley, and Coolah districts.

Registrations.—No marked expansion by way of new registrations occurred during the year. The new registrations were mostly connected with factories where changes of ownership had taken place. The only notable addition to the registry was a tomato pulping factory, which was established in the Bathurst district.

Structural Alterations.—As most of the factories in the district have been long established, there was small scope for the enforcement of the provisions of the Act under this heading.

Sanitation and Ventilation.—The sanitary conditions and matters relating to ventilation of the factories were found to be fairly satisfactory.

Particular attention was given to factories where food stuffs were manufactured, and, where required, directions were issued. Directions were also issued in several cases to provide hoods and flues to carry off to the outer air smoke, steam and fumes from melting pots, &c.

Fencing and Guarding of Machinery.—Strict supervision was exercised with regard to this section of the Act, and numerous directions were issued to occupiers to securely fence dangerous parts. In one factory, where I found a flywheel and belt unfenced, the occupier considered that fencing was unnecessary as the machine in question was not in constant use. A direction was issued to fence the parts forthwith, and following upon a report to the Chief Inspector a warning letter was sent to the occupier.

No opposition was met relating to the enforcement of directions under this heading. Occupiers, almost without exception, readily comply with instructions to fence dangerous machinery, and also co-operate with the object of securing the best results. The literature and illustrated pamphlets issued by the Department are highly appreciated by occupiers, and there is no doubt regarding the effectiveness of the practice now adopted in freely distributing the cards, &c., referred to.

A further improvement was noticeable with respect to the adoption of "safety-first" principles, more so in factories where the manager displays an active interest in such matters. The result is that the conviction of the manager is circulated throughout the factory with such good effect that all classes of workmen feel the reproach that is attached to an employee, who, through carelessness, endangers the safety of anyone employed in the factory.

Accidents.—The number of accidents reported during the year were not numerous, and no fatal accident occurred. Two accidents occurred at circular saws. In the first case a youth was in the act of cutting a small piece of timber when his hand came in contact with the saw and was lacerated, and an investigation later disclosed that the boy had used the saw without permission. The second accident befel an adult. The saw had been installed a short time, and, owing to the nature of the work—cutting staves for casks—it was thought that a guard was unnecessary. The operator was not cutting timber when the accident happened; he was near the machine, when he lost his balance, and in falling he followed the natural impulse of extending his arms towards the danger point, with the object of preventing his body from coming in contact with it, and in so doing his hand struck the saw and was severely lacerated.

Fire Escapes.—As there are very few factories, situated above the first floor, in country districts, small scope presented itself for consideration under this heading. But at one factory where a building of four floors was reconstructed, it was found necessary to take steps to have an approved fire escape installed.

Bakehouses.—Matters under this heading received careful attention, like all such places where food is prepared for trade or sale.

An objectionable habit prevailed in some bakehouses by using the corner of the bakehouse near the firebox as a dump for waste and litter, the stuff being allowed to accumulate until the fire was lit, when it was thrown in and burned. In all cases where this nuisance was found immediate steps were taken to have it discontinued.

The objection created by escape of smoke from the firebox into the bakehouse was met by the issue of directions to instal hoods over the firebox and oven door, with a flue leading to the outer air.

Certificates of Fitness.—A few breaches of this section of the Act were discovered where the juveniles were bordering on their sixteenth year. This class sometimes mislead occupiers by stating that they are sixteen years of age. With the object of enabling certificates of fitness to be readily secured I find it a good practice to keep occupiers supplied with the necessary forms.

General.—No marked alteration took place during the year with regard to the number of factories in the district. The iron and steel, cement-making, lime-burning, tile making in the Penrith district, brick and pipe making and tanning industries, continue to flourish. Tile making in the Bathurst district has ceased, and slate cutting in the Mudgee district has been suspended.

Mr. Inspector Young (Broken Hill) reports:—

At the beginning of the year I was transferred from Head Office to take charge of the Broken Hill district, and, although there are not the same number of factories as I would have on my book in a metropolitan district, I have found my time fully occupied by also attending to inspections under the Industrial Arbitration, Early Closing, Workmen's Compensation, and Gas Acts, and conciliation work in connection with disputes and strikes.

Registrations.—There were no new factories opened, and registrations of factories were confined to changes in ownership.

Fencing Machinery.—The factories have been in existence for several years; no new machinery installed during the year, and I found fencing and guards provided where necessary.

Fire Escapes.—There are no factories above the first floor, and no fire escapes are required. In several places fire extinguishers are provided.

Accidents.—No accidents were reported during the year.

Bakehouses.—I have had to give occasional orders for the lime-washing and general cleaning, otherwise the bakehouses are in a fairly good condition.

Certificates—For the year there were seven applications for certificates by boys between the ages of 14 and 16, and in each case certificates were issued.

There were no special permits to children under 14.

General.—There does not seem any likelihood of new factories, the population having very much decreased. In 1914 there were 8,674 employees at the mines; in December, 1924, there were only 5,356. I have many inquiries from boys between the ages of 14 and 16 for employment. They are not big enough for the mines, and, unfortunately, there is very little scope in other callings. The railway direct from Sydney, which it is expected will be completed in about eighteen months, should make a great improvement in Broken Hill.

Appendix I.

Persons employed, by Class of Factory, Classified by Industry—1924.

THE STATE.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 1.—TREATING RAW MATERIAL, THE PRODUCT OF PASTORAL PURSUITS.												
(*a*) *Animal Products.*												
Boiling-down and tallow-refining ...	9	.....	.....	6	.....	6	.....	105	.....	117	.....	117
Glue	2	.....	.....	2	32	3	37	101	19	106	88	194
Tanning	72	43	.....	32	3	44	2	834	5	953	10	963
Wool-scouring and fellmongering ...	35	6	.....	28	.....	33	.....	597	.....	664	.....	664
Other animal products...	11	21	.....	32	.....	33	.....	172	.....	258	.....	258
Total	129	70	.....	100	35	119	39	1,809	24	2,098	98	2,196
(*b*) *Vegetable Products.*												
Chaff-cutting	134	2	2	3	10	8	6	313	1	326	19	345
Total, Class 1...	263	72	2	103	45	127	45	2,122	25	2,424	117	2,541
CLASS 2.—OILS AND FATS—ANIMAL AND VEGETABLE.												
Oil and grease	10	5	.....	8	.....	15	.....	149	.....	177	.....	177
Soap, candles, &c.	25	21	24	28	62	61	99	356	74	466	259	725
Total, Class 2...	35	26	24	36	62	76	99	505	74	643	259	902
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &C.												
Asphalt	8	1	.....	5	.....	3	.....	84	.....	93	.....	93
Bricks and tiles	145	127	.....	177	.....	225	.....	2,665	1	3,194	1	3,195
Glass and glass bottles	10	5	.....	53	.....	62	.....	634	.....	754	.....	754
Glass (ornamental)	33	23	.....	84	1	71	2	315	.....	493	3	496
Lime, plaster, and cement	18	3	.....	13	.....	22	.....	621	.....	659	.....	659
Marble and slate	14	3	.....	1	.....	11	.....	172	.....	187	.....	187
Modelling and fibrous plaster... ...	26	5	.....	16	.....	36	.....	193	.....	250	.....	250
Monumental masonry	31	3	.....	10	.....	15	.....	186	.....	214	.....	214
Pottery and earthenware	19	57	.....	61	.....	48	.....	588	19	754	19	773
Stone-dressing	57	2	.....	18	.....	22	.....	869	.....	911	.....	911
Other works	26	6	.....	14	.....	25	.....	403	.....	448	.....	448
Total, Class 3	387	235	.....	452	1	540	2	6,730	20	7,957	23	7,980
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	1	.....	.....	... ..	.....	.....	.....	2	.....	2	.....	2
Boxes and packing-cases	61	28	.....	80	.....	86	.....	618	.....	812	.....	812
Cooperage	13	12	.....	9	.....	16	.....	199	.....	236	.....	236
Joinery	314	81	1	324	2	343	3	2,456	3	3,204	9	3,213
Saw-milling—Timber	608	38	.....	193	.....	313	4	3,448	.....	3,992	4	3,996
Firewood	209	.....	.....	6	.....	13	.....	335	.....	354	.....	354
Wood-turning	23	8	.....	13	.....	11	.....	63	.. ...	95	.....	95
Other works	46	2	1	40	1	50	.....	279	2	371	4	375
Total, Class 4	1,275	169	2	665	3	832	7	7,400	5	9,066	17	9,083
CLASS 5.—METAL WORKS, MACHINERY, &C.												
Agricultural implements	19	3	.....	16	.....	35	.....	200	.....	254	.....	254
Brass and copper	57	40	4	82	4	109	8	582	1	813	17	830
Cutlery	29	7	6	18	3	32	3	97	1	154	13	167
Engineering	365	172	1	581	7	887	12	6,280	6	7,920	26	7,946
Galvanised iron	62	47	.....	138	.....	144	.....	794	1	1,123	1	1,124
Iron works, foundries, & boilermaking	173	96	1	347	.....	494	9	7,658	10	8,595	20	8,615
Iron safes and doors	6	5	.....	9	.....	18	.....	98	.....	130	.....	130
Lead-mills	2	.....	.....	.....	.....	.....	.....	26	.....	26	.....	26
Railway carriage works	3	5	1	3	2	18	5	73	5	99	13	112
Smelting and ore dressing	8	3	.....	3	.....	13	.....	385	.....	404	.....	404
Stoves and ovens	17	37	1	80	4	92	3	598	10	807	18	825
Tinsmithing	27	116	23	162	37	202	95	614	74	1,094	229	1,323
Wire-working	21	44	.....	326	7	400	13	1,631	16	2,401	36	2,437
Other metal works	91	90	10	154	21	188	18	936	5	1,368	54	1,422
Plumbing	33	7	.....	40	.....	39	.....	310	.....	396	.....	396
Farriery	33	1	.....	8	.....	8	.....	93	.....	110	.....	110
Total, Class 5...	946	673	47	1,967	85	2,679	166	20,375	129	25,694	427	26,121
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(*a*) *Animal Food.*												
Bacon	18	2	.....	1	.....	6	.....	166	.....	175	.....	175
Butchers' smallgoods	930	5	.....	34	.....	89	2	1,324	2	1,452	4	1,456
Margarine	2	.....	.....	15	... ..	13	.....	96	.....	124	.....	124
Meat-preserving	6	.....	.....	2	4	2	4	55	19	59	27	86
Total	956	7	.....	52	4	110	6	1,641	21	1,810	31	1,841

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 6.—CONNECTED WITH FOOD AND DRINK AND THE PREPARATION THEREOF—*continued.*												
(b) *Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.*												
Biscuits	9	237	234	150	252	90	272	326	302	803	1,060	1,863
Bread and pastry	1,445	62	10	330	25	334	28	2,890	118	3,616	181	3,797
Confectionery	220	90	236	165	412	170	530	747	368	1,172	1,546	2,718
Corn-flour and oatmeal	15	12	15	17	41	23	40	269	59	321	155	476
Flour-milling	62	1	.....	33	1	46	1	529	6	609	8	617
Jam and fruit preserving	31	6	2	18	30	58	27	236	207	318	266	584
Pickles, sauces, and vinegar	7	8	2	6	10	24	9	49	44	87	65	152
Poultry foods and dog biscuits ..	9	2	.....	14	.....	13	.....	158	2	187	2	189
Self-raising flour	4	...	2	3	8	2	22	10	12	15	44	59
Sugar-refining	4	3	4	11	2	31	3	626	6	671	15	686
Total	1,806	421	505	747	781	791	932	5,840	1,124	7,799	3,342	11,141
(c) *Drinks and Stimulants.*												
Aerated waters and cordials	179	11	6	93	24	98	22	548	21	750	73	823
Brewing	17	3	.....	13	.....	42	.....	938	.....	996	.....	996
Condiments, coffee, spices, &c. ...	43	16	42	12	75	20	167	182	188	230	472	702
Distillery	1	...	.....	...	.....	1	.....	46	.....	47	.....	47
Ice and refrigerating	228	10	.....	40	.....	41	4	908	4	999	8	1,007
Tea blending and packing	17	38	23	11	45	18	61	78	65	145	194	339
Wine, spirits, and beer bottling ...	60	1	.....	21	.....	47	21	388	52	457	73	530
Total	545	79	71	190	144	267	275	3,088	330	3,624	820	4,444
(d) *Narcotics.*												
Tobacco, cigars, and cigarettes ...	12	60	122	78	250	107	288	653	607	898	1,267	2,165
Total, Class 6	3,319	567	698	1,067	1,179	1,275	1,501	11,222	2,082	14,131	5,460	19,591
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(a) *Textile.*												
Woollen mills	18	84	154	51	183	55	262	574	716	764	1,315	2,079
(b) *Dress.*												
Boots and shoes :—Order made ...	531	34	3	67	10	69	3	915	25	1,085	41	1,126
Factory made ...	111	117	215	193	328	206	348	1,949	968	2,465	1,859	4,324
Clothing :—Men's slops	88	24	362	54	546	74	596	556	1,523	708	3,027	3,735
Women's slops	141	8	217	14	359	4	470	97	1,302	123	2,348	2,471
Tailoring	413	29	265	62	471	88	574	1,307	1,965	1,486	3,275	4,761
Corsets	8	2	42	1	84	1	117	9	172	13	415	428
Dressmaking and millinery :—												
Makers' material	151	8	342	9	519	8	622	34	1,294	59	2,777	2,836
Customers' material	197	...	118	1	155	2	179	4	453	7	905	912
Dye works	34	4	2	14	13	14	16	138	70	170	101	271
Furriery	25	12	20	21	49	26	44	62	86	121	199	320
Hats and caps	35	32	126	55	142	70	201	315	369	472	838	1,310
Hosiery and knitting	68	24	172	31	301	51	503	160	540	266	1,516	1,782
Oilskin and waterproof clothing ...	6	...	.....	...	.....	2	7	5	15	7	22	29
Shirts, ties, and scarves	52	15	205	22	334	37	321	95	680	169	1,540	1,709
Umbrellas	7	4	7	4	13	3	33	30	53	41	106	147
Underclothing	97	3	147	6	202	12	245	...	.....	...	.....	...
Wigs and hair work	12	...	10	...	13	...	25	9	26	9	74	83
Total	1,976	316	2,253	554	3,539	667	4,304	5,731	9,997	7,268	20,093	27,361
(c) *Fibrous Materials and Textiles not elsewhere included.*												
Bags and sacks	10	27	40	26	60	22	76	94	95	169	271	440
Rope and twine...	8	12	9	60	10	51	15	87	4	210	38	248
Tents and tarpaulins	16	4	6	2	13	9	15	57	76	72	110	182
Total	34	43	55	88	83	82	106	238	175	451	419	870
Total, Class 7	2,028	443	2,462	693	3,805	804	4,672	6,543	10,888	8,483	21,827	30,310
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	20	9	2	23	1	16	8	77	12	125	23	148
Electrotyping and stereotyping, type founding, and printers' materials.	17	11	12	18	13	14	7	88	5	131	37	168
Paper bags and boxes	17	42	149	35	188	40	221	131	280	248	838	1,086
Paper mills, cardboard, and straw-board	7	11	10	38	19	43	27	372	87	464	143	607
Photo.-engraving, photo.-lithography, and photo. materials	52	8	25	11	55	21	78	108	198	148	356	504
Printing, bookbinding, and manufacturing stationery	521	280	242	552	406	678	439	4,087	797	5,597	1,884	7,481
Total, Class 8...	634	361	440	677	682	812	780	4,863	1,379	6,713	3,281	9,994
CLASS 9.—MUSICAL INSTRUMENTS, &C.												
Pianos, organs, and sewing-machines..	33	25	1	70	7	92	20	447	26	634	54	688
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	5	5	.....	4	.....	2	2	17	1	28	3	31

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Tot
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY, HARNESS, &c.												
Coaches and waggons	250	39	.....	152	.....	162	.....	1,039	... ...	1,392	.....	1,3
Cycles and motor cars	717	160	1	537	3	546	14	3,123	30	4,366	48	4,4
Perambulators, &c.	8	12	.....	14	2	23	3	119	1	168	6	1
Saddlery, harness, &c....	50	11	.....	20	7	32	7	281	25	344	39	3
Naves, spokes, &c.	9	...	.....	4	.....	14	.....	53	.....	71	.....	
Whips	3	1	.....	1	.....	...	.....	12	.....	14	.....	
Total, Class 11	1,037	223	1	728	12	777	24	4,627	56	6,355	93	6,4
CLASS 12.—SHIPBUILDING, FITTINGS, &c.												
Docks and slips...	4	...	.....	8	.....	40	.....	212	.....	260	.....	2
Sailmaking	6	...	.....	...	.....	...	.....	34	5	34	5	
Ship and boat building...	30	3	.....	26	.....	57	.....	727	.....	813	.....	8
Total, Class 12	40	3	.....	34	.....	97	.....	973	5	1,107	5	1,1
CLASS 13.—FURNITURE, BEDDING, &c.												
Bedding, flock, and upholstery ...	61	41	30	74	47	100	69	457	236	672	382	1,0
Carpet-sewing	2	1	6	2	3	3	8	10	43	16	60	
Iron Bedsteads	6	27	.....	16	.....	27	.....	208	.....	278	.....	2
Billiard tables	1	...	.....	10	.....	6	1	35	7	51	8	
Chair-making	17	11	.....	23	.....	37	.....	161	2	232	2	2
Furniture and cabinet making—												
European	246	95	.....	429	.....	454	2	2,026	7	3,004	9	3,0
Chinese	35	...	.....	1	.....	5	.....	274	.....	280	.....	2
Bamboo and wicker	11	2	.....	8	1	10	.. ...	94	2	114	3	1
Picture frames	27	9	2	11	7	21	9	107	30	148	48	1
Window blinds	11	4	7	9	4	10	2	49	27	72	40	1
Total, Class 13	417	190	45	583	62	673	91	3,421	354	4,867	552	5,4
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c. ...	20	16	31	11	46	13	61	73	62	113	200	3
Chemical works and drugs	67	35	73	44	81	52	153	412	209	543	516	1,0
Fertilisers	8	3	.....	8	.....	9	.....	126	.....	146	.....	1
Perfumes and essences...	18	9	10	23	29	22	45	67	50	121	134	2
Paints and varnishes	21	45	5	63	12	48	9	408	30	564	56	6
Other Minor Works	2	...	...	1	2	2	1	7	3	10	6	
Total, Class 14	136	108	119	150	170	146	269	1,093	354	1,497	912	2,4
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	30	3	4	13	6	20	9	65	9	101	28	1
Surgical instruments	6	1	1	3	2	5	3	30	4	39	10	4
Other Minor Works	3	...	.....	2	.....	2	.....	5	.....	9	.....	
Total, Class 15	39	4	5	18	8	27	12	100	13	149	38	1
CLASS 16.—TIMEPIECES, JEWELLERY, AND PLATEDWARE.												
Electroplating	36	22	7	35	10	31	3	173	8	261	28	2
Jewellery	75	19	6	28	27	102	31	446	55	595	119	7
Total, Class 16	111	41	13	63	37	133	34	619	63	856	147	1,0
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	109	83	11	278	25	347	59	1,040	66	1,748	161	1,9
Electric light and power works* ...	319	4	.....	21	.....	30	.....	862	.....	917	.....	9
Gas works	43	3	.....	8	.....	19	.....	1,405	.....	1,435	.....	1,4
Lamps and gas mantles	6	2	.....	4	22	5	36	34	25	45	83	1
Hydraulic power	2	...	.. ...	...	.....	6	.....	44	.....	50	.....	5
Coke works	12	12	.....	35	... ..	26	.....	601	.....	674	.....	6
Total, Class 17	491	104	11	546	47	433	95	3,986	91	4,869	244	5,1
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy leather	19	6	37	13	45	8	65	76	74	103	221	3
Leather belting	6	4	.....	4	.....	4	.....	43	.....	55	.....	5
Portmanteaux	11	41	17	31	28	41	26	170	31	283	102	3
Other Minor Works	26	18	31	21	24	25	26	96	43	160	124	2
Total, Class 18	62	69	85	69	97	78	117	385	148	601	447	1,0
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting...	5	...	...	...	1	11	.....	67	11	78	12	9
Brooms, brushes	30	28	23	29	17	47	21	169	34	273	95	3
Florists and seedsmen	8	3	9	2	8	1	11	22	9	28	37	6
Laundries—European†	154	1	60	7	194	16	285	229	1,129	253	1,668	1,9
Chinese	28	...	.....	...	...	...	2	31	3	31	5	3
Rubber goods	9	29	19	40	46	73	113	604	341	746	519	1,2
Toys	27	16	9	26	17	21	14	57	15	120	55	1
Painting and sign-writing	11	3	1	17	1	21	3	459	.....	500	5	5
Other Minor Works	29	18	22	21	23	32	34	128	33	199	112	3
Total, Class 19	301	98	143	142	307	222	483	1,766	1,575	2,228	2,508	4,7
Total, All Industries ...	11,559	3,416	4,098	7,867	6,609	9,825	8,419	77,194	17,288	98,302	36,414	134,7

* Including 255 electric lighting plants for picture shows, employing 285 persons.

† Charitable institutions doing outside laundry work are included in the number of factories registered.

Appendix II.

Factories, by Number of Persons employed—1920–1924.

Year.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																	
1920	2,640	1,452	752	335	169	178	99	54	70	33	27	10	4	7	8	4	5,842
1921	2,603	1,604	751	340	187	152	96	44	78	22	26	10	6	8	3	4	5,934
1922	2,912	1,648	776	342	206	161	103	49	73	34	32	8	7	10	3	3	6,367
1923	3,147	1,647	768	347	171	198	90	44	66	37	25	14	3	8	5	3	6,573
1924	3,246	1,756	822	349	187	197	96	48	61	43	29	11	6	9	4	4	6,868
Newcastle District.																	
1920	528	238	94	29	11	14	3	3	9	...	5	...	1	...	...	1	936
1921	598	258	89	29	11	12	7	...	3	3	2	3	1	...	...	1	1,017
1922	676	269	86	28	15	9	5	...	5	2	4	...	...	...	1	...	1,100
1923	836	185	83	32	9	7	4	3	5	3	2	...	...	...	1	1	1,171
1924	758	300	77	39	6	14	2	3	3	4	1	1	1	1	...	1	1,211
Rest of State.																	
1920	2,127	600	177	37	9	7	4	1	...	...	3	1	...	...	1	...	2,967
1921	2,195	707	170	25	18	7	3	1	4	2	...	2	1	1	...	...	3,136
1922	2,294	680	176	26	12	7	4	1	3	3	...	...	1	...	...	...	3,207
1923	2,587	475	183	34	14	4	3	2	6	1	2	...	...	2	1	...	3,314
1924	2,415	816	184	30	9	10	4	1	4	2	1	1	...	3	...	...	3,480
State.																	
1920	5,295	2,290	1,023	401	189	199	106	58	79	33	35	11	5	7	9	5	9,745
1921	5,396	2,569	1,010	394	216	171	106	45	85	27	28	15	8	9	3	5	10,087
1922	5,882	2,597	1,038	396	233	177	112	50	81	39	36	8	8	10	4	3	10,674
1923	6,570	2,307	1,034	413	194	209	97	49	77	41	29	14	3	10	7	4	11,058
1934	6,419	2,872	1,083	418	202	221	102	52	68	49	31	13	7	13	4	5	11,559

Appendix III.

Factories, by Class and Number of Persons employed, 1924.

Class of Factory.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																	
I. Treating raw material, product of pastoral pursuits	58	31	18	9	2	5	2	1	1	1	1	1	...	...	...	...	130
II. Oils and fats—animal, vegetable, &c	6	5	1	2	3	2	...	...	1	...	...	...	1	...	...	...	21
III. Processes relating to stone, clay, glass, &c.	44	69	44	21	20	20	7	3	1	3	1	1	...	1	...	...	235
IV. Working in wood	214	130	53	16	7	12	3	3	2	2	1	...	...	...	...	...	443
V. Metal works, machinery, &c.	281	203	114	40	24	24	14	12	10	7	6	2	1	...	1	1	740
VI. Connected with food and drink, &c.	1,078	260	76	39	10	18	11	3	6	5	3	1	1	4	2	1	1,518
VII. Clothing and textile fabrics, &c.	734	409	217	96	64	54	29	12	21	12	9	2	1	4	...	...	1,664
VIII. Books, paper, printing, engraving, &c.	125	149	64	34	10	19	9	3	7	6	2	3	1	...	...	...	432
IX. Musical instruments, &c.	9	10	7	4	1	...	...	...	...	...	...	...	1	...	...	...	32
X. Arms and explosives	1	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XI. Vehicles and fittings, saddlery, harness, &c.	232	170	47	13	9	10	6	2	2	2	1	...	...	...	...	...	494
XII. Ship and boat building, &c.	11	7	4	1	3	1	1	...	...	1	1	...	...	...	1	...	31
XIII. Furniture, bedding, &c.	121	105	56	29	12	13	2	4	6	3	...	...	...	...	...	...	351
XIV. Drugs, chemicals, and by-products	40	40	14	14	4	5	2	1	2	...	2	...	...	...	...	...	124
XV. Surgical and other scientific instruments	21	9	4	1	...	...	...	...	...	...	...	...	...	...	...	...	35
XVI. Jewellery and plated-ware, &c.	54	29	12	2	5	1	...	...	...	...	...	...	...	...	...	...	103
XVII. Heat, light, and power	113	34	16	7	4	3	6	2	1	1	1	1	...	...	...	1	190
XVIII. Leatherware (excepting saddlery and harness)	19	16	15	3	5	1	1	...	1	...	1	...	...	...	...	...	62
XIX. Minor wares not elsewhere included	85	76	60	18	4	9	3	2	...	...	...	...	...	...	...	1	258
Total	3,246	1,756	822	349	187	197	96	48	61	43	29	11	6	9	4	4	6,868
Newcastle District.																	
I. Treating raw material, product of pastoral pursuits	12	2	...	1	...	...	...	...	1	...	...	...	...	...	...	...	16
II. Oils and fats—animal, vegetable, &c.	1	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	4
III. Processes relating to stone, clay, glass, &c.	20	16	7	7	...	2	...	...	...	...	...	...	...	...	...	...	52
IV. Working in wood	125	55	24	9	1	3	...	1	...	...	...	...	...	...	...	...	218
V. Metal work, machinery, &c.	31	35	5	5	...	1	...	...	2	2	1	1	1	1	...	1	86
VI. Connected with food and drink, &c.	361	60	6	6	...	2	...	1	...	1	...	...	...	...	...	...	437
VII. Clothing and textile fabrics, &c.	52	52	12	4	2	4	1	1	...	...	...	...	...	...	...	...	128
VIII. Books, paper, printing, engraving, &c.	17	18	4	1	2	1	...	...	...	...	...	...	...	...	...	...	63
IX. Musical instruments, &c.	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XI. Vehicles and fittings, saddlery, harness, &c.	52	33	7	...	1	...	...	...	...	...	...	...	...	...	...	...	93
XII. Ship and boat building, &c.	5	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	9
XIII. Furniture, bedding, &c.	15	11	3	2	...	...	1	...	...	...	...	...	...	...	...	...	32
XIV. Drugs, chemicals, and by-products	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	4
XV. Surgical and other scientific instruments	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XVI. Jewellery and plated-ware, &c.	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
XVII. Heat, light and power	55	8	3	2	...	1	...	...	...	...	...	...	...	...	...	...	69
XIX. Minor wares, n.e.i.	5	2	3	2	...	...	...	...	...	...	...	...	...	...	...	...	12
Total	758	300	77	39	6	14	2	3	3	4	1	1	1	1	...	1	1,211

Appendix III—*continued.*

Class of Factory.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Rest of State.																	
I. Treating raw material, product of pastoral pursuits	75	34	7	1	...	...	...	..	...	...	...	...	...	...	...	...	117
II. Oils and fats—animal, vegetable, &c.	8	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10
III. Processes relating to stone, clay, glass, &c	31	37	16	7	1	3	2	1	...	...	...	1	...	1	...	...	100
IV. Working in wood	385	161	58	6	2	2	...	...	...	...	..	...	...	...	...	...	614
V. Metal work, machinery, &c.	61	44	7	3	...	...	1	...	...	1	1	...	...	2	...	...	120
VI. Connected with food and drink, &c.	1,183	145	25	5	1	1	...	...	3	1	...	...	...	...	...	...	1,364
VII. Clothing and textile fabrics, &c	91	115	23	2	1	2	1	...	1	...	...	...	...	...	...	...	236
VIII. Books, paper, printing, engraving, &c.	80	68	9	1	1	...	...	...	...	...	...	...	...	...	...	...	159
XI. Vehicles and fittings, saddlery, harness, &c.	277	156	16	1	...	...	...	...	...	...	...	...	...	...	...	...	450
XIII. Furniture, bedding, &c.	23	8	3	...	...	...	...	...	...	...	...	...	...	...	...	...	34
XIV. Drugs, chemicals, and by-products	3	1	3	...	...	1	...	...	...	...	...	...	..	...	...	...	8
XV. Surgical and other scientific instruments	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XVI. Jewellery and plated-ware, &c.	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
XVII. Heat, light and power	179	37	9	4	2	1	...	...	...	...	...	...	...	...	...	...	232
XIX. Minor wares, n.e.i.	15	7	8	...	1	...	...	...	...	...	..	...	..	...	...	...	31
Total	2,415	816	184	30	9	10	4	1	4	2	1	1	...	3	...	...	3,480
State.																	
I. Treating raw materials, product of pastoral pursuits	145	67	25	11	2	5	2	1	2	1	1	1	...	...	...	...	263
II. Oils and fats—animal, vegetable, &c.	15	9	1	2	3	2	...	...	1	1	...	...	1	...	...	...	35
III. Processes in stone, clay, glass, &c.	95	122	67	35	21	25	9	4	1	3	1	2	...	2	...	...	387
IV. Working in wood	724	346	135	31	10	17	3	4	2	2	1	...	...	...	...	...	1,275
V. Metal works, machinery, &c.	373	282	126	48	24	25	15	12	12	10	8	3	2	3	1	2	946
VI. Connected with food and drink, &c.	2,622	465	107	50	11	21	11	4	9	7	3	1	1	4	2	1	3,319
VII. Clothing and textile fabrics, &c.	877	576	252	102	67	60	31	13	22	12	9	2	1	4	...	...	2,028
VIII. Books, paper, printing, and engraving, &c.	222	235	77	36	13	20	9	3	7	6	2	3	1	...	...	...	634
IX. Musical instruments, &c.	9	10	8	4	1	...	...	...	...	...	...	...	1	...	..	...	33
X. Arms and explosives	1	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XI. Vehicles and fittings, saddlery and harness, &c.	561	359	70	14	10	10	6	2	2	2	1	...	...	...	...	...	1,037
XII. Ship and boat building, &c.	16	10	5	1	3	1	1	...	...	1	1	...	...	...	1	...	40
XIII. Furniture, bedding, &c.	159	124	62	31	12	13	3	4	6	3	...	...	...	..	...	...	417
XIV. Drugs, chemicals, and by-products	45	42	18	14	4	6	2	1	2	...	2	...	...	...	...	...	136
XV. Surgical and other scientific instruments	25	9	4	1	...	...	...	...	...	...	...	...	...	...	...	...	39
XVI. Jewellery and plated-ware, &c.	59	32	12	2	5	1	...	...	...	...	...	...	...	...	...	...	111
XVII. Heat, light, and power	347	79	28	13	6	5	6	2	1	1	1	1	...	...	..	1	491
XVIII. Leatherware, n.e.i.	19	16	15	3	5	1	1	..	1	...	1	...	...	...	...	...	62
XIX. Minor wares, n.e.i.	105	85	71	20	5	9	3	2	...	..	...	...	...	...	...	1	301
Total	6,419	2,872	1,083	418	202	221	102	52	68	49	31	13	7	13	4	5	11,559

Appendix IV.

Persons employed, by Class of Factory, Classified by Industry—1924.

Metropolitan District.

Class of Factory.	Number of Factories on Register.	Persons employed.									
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Class 1.—Treating Raw Material, the Product of Pastoral Pursuits.												
(a) *Animal Products.*												
Boiling-down and tallow-refining	7	...	...	6	...	6	...	96	...	108	...	108
Glue	2	...	...	2	32	3	37	101	19	106	88	194
Tanning	66	42	...	32	3	42	2	797	5	913	10	923
Wool-scouring and fellmongering	17	6	...	26	...	28	...	505	...	565	...	565
Other animal products	7	13	...	6	...	10	...	79	...	108	...	108
Total	99	61	...	72	35	89	39	1,578	24	1,800	98	1,898
(b) *Vegetable Products.*												
Chaff-cutting	31	2	...	2	...	2	...	55	...	61	...	61
Total, Class 1	130	63	...	74	35	91	39	1,633	24	1,861	98	1,959
Class 2.—Oils and Fats—Animal and Vegetable.												
Oil and grease	8	5	...	8	...	15	...	146	...	174	...	174
Soap, candles, &c.	13	11	19	21	46	43	83	237	62	312	210	522
Total, Class 2	21	16	19	29	46	58	83	383	62	486	210	696

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.												
Asphalt	7	1	...	4	...	2	...	76	...	83	...	83
Bricks and tiles	66	115	...	143	...	167	...	1,954	1	2,379	1	2,380
Glass and glass bottles	10	5	...	53	...	62	...	634	...	754	...	754
Glass (ornamental)	31	23	...	82	1	66	2	310	...	481	3	484
Lime, plaster, and cement	7	...	...	2	...	5	...	62	...	69	...	69
Marble and slate	11	3	...	1	...	11	...	170	...	185	...	185
Modelling and fibrous plaster	24	4	...	14	...	32	...	183	...	233	...	233
Monumental masonry	20	2	...	8	...	10	...	132	...	152	...	152
Pottery and earthenware	15	57	...	58	...	42	...	551	19	708	19	727
Stone-dressing	22	1	...	10	...	13	...	271	...	295	...	295
Other works	22	4	...	13	...	24	...	398	...	439	...	439
Total, Class 3	235	215	...	388	1	434	2	4,741	20	5,778	23	5,801
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	1	...	.....	...	.....	...	.....	2	.....	2	.....	2
Boxes and packing-cases	49	23	.....	74	.....	77	.....	555	.....	729	.....	729
Cooperage	12	9	.....	7	.....	14	.....	181	.....	211	.....	211
Joinery	204	63	1	244	2	245	3	1,827	3	2,379	9	2,388
Saw-milling—Timber	73	27	.....	88	... ..	127	4	1,006	.....	1,248	4	1,252
Firewood	46	...	... .	2	.....	4	.....	106	.....	112	.....	112
Wood-turning	21	8	.....	13	.....	11	.....	60	.....	92	.....	92
Other works	37	2	1	35	1	38	.....	198	2	273	4	277
Total, Class 4	443	132	2	463	3	516	7	3,935	5	5,046	17	5,063
CLASS 5.—METAL WORKS, MACHINERY, &c.												
Agricultural implements	11	3	.....	14	.....	30	.. ...	167	.....	214	.....	214
Brass and copper	54	40	4	80	4	106	8	553	1	779	17	796
Cutlery	29	7	6	17	3	32	3	96	1	152	13	165
Engineering	287	142	1	485	7	765	12	4,769	6	6,161	26	6,187
Galvanised iron	50	44	.....	87	.....	109	.....	539	.....	779	.. ...	779
Iron works, foundries, and boiler-making	113	73	1	227	.....	296	9	3,381	10	3,977	20	3,997
Iron safes and doors	6	5	.....	9	.....	18	.....	98	.....	130	.....	130
Lead-mills	2	...	.....	...	.....	...	.....	26	.....	26	.....	26
Railway carriage works	2	5	1	3	2	18	5	73	5	99	13	112
Smelting and ore dressing	5	2	.....	3	.....	13	.....	95	.....	113	.... .	113
Stoves and ovens	15	33	1	76	4	85	3	578	10	772	18	790
Tinsmithing	21	107	23	155	35	187	92	570	73	1,019	223	1,242
Wire-working	17	32	.....	135	.....	218	.....	775	.....	1,160	.....	1,160
Other metal works	87	82	10	141	21	177	18	920	5	1,320	54	1,374
Plumbing	18	4	.....	28	.....	22	.....	235	.....	289	.....	289
Farriery	23	...	.....	2	.....	4	.....	65	.....	71	.....	71
Total, Class 5	740	579	47	1,462	76	2,080	150	12,945	111	17,061	384	17,445
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(a) *Animal Food.*												
Bacon	9	1	.. ...	...	.....	6	.....	97	.....	104	.....	104
Butchers' small goods	495	2	.....	19	.....	60	2	713	1	794	3	797
Margarine	2	...	.....	15	.....	13	.....	96	.....	124	.....	124
Meat-preserving	4	...	.....	2	4	2	4	50	19	54	27	81
Total	510	3	.. ...	36	4	81	6	956	20	1,076	30	1,106
(b) *Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.*												
Biscuits	8	235	234	146	250	88	270	318	391	787	1,055	1,842
Bread and pastry	543	32	9	190	23	192	21	1,535	97	1,949	150	2,099
Confectionery	170	85	234	155	391	160	506	684	358	1,084	1,489	2,573
Corn-flour and oatmeal	10	3	13	5	21	2	14	93	26	101	74	175
Flour-milling	19	...	.....	7	1	17	1	244	6	268	8	276
Jam and fruit preserving	22	6	2	17	30	56	27	207	207	286	266	552
Pickles, sauces, and vinegar	7	8	2	6	10	24	9	49	44	87	65	152
Poultry foods and dog biscuits	9	2	.....	14	.....	13	.....	158	2	187	2	189
Self-raising flour	4	...	2	3	8	2	22	10	12	15	44	59
Sugar-refining	1	..	4	4	2	15	3	315	6	334	15	349
Total	793	371	500	545	736	569	873	3,613	1,059	5,093	3,168	8,266
(c) *Drinks and Stimulants.*												
Aerated waters and cordials	30	1	6	43	20	53	20	225	17	322	63	385
Brewing	7	1	.. ...	7	.....	32	.....	805	.....	845	.....	845
Condiments, coffee, spices, &c.	40	14	40	10	61	18	156	177	185	219	442	661
Distillery	1	...	.....	...	.....	1	.....	46	.....	47	.....	47
Ice and refrigerating	81	2	.....	11	.....	21	4	428	4	462	8	470
Tea blending and packing	17	38	23	11	45	18	61	78	65	145	194	339
Wine, spirits, and beer bottling	27	...	.....	18	.....	43	21	313	52	374	73	447
Total	203	56	69	100	126	186	262	2,072	323	2,414	780	3,194
(d) *Narcotics.*												
Tobacco, cigars, and cigarettes	12	60	122	78	250	107	288	653	607	898	1,267	2,165
Total, Class 6	1,518	490	691	759	1,116	943	1,429	7,294	2,009	9,486	5,245	14,731

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(a) *Textile.*												
Woollen mills	15	76	146	49	173	51	255	529	681	705	1,255	1,960
(b) *Dress.*												
Boots and shoes—Order made ...	447	28	3	46	10	55	3	747	25	876	41	917
Factory made ...	102	111	193	176	303	195	333	1,855	945	2,337	1,774	4,111
Clothing—Men's slops	84	23	344	52	519	72	536	544	1,465	691	2,864	3,555
Women's slops	136	8	206	14	343	4	450	93	1,274	119	2,273	2,392
Tailoring	222	15	213	35	317	47	362	781	1,569	878	2,461	3,339
Corsets	8	2	42	1	84	1	117	9	172	13	415	428
Dressmaking and millinery—												
Makers' material	132	8	329	9	488	8	574	34	1,221	59	2,612	2,671
Customers' material	168	...	107	1	133	2	150	4	394	7	784	791
Dye Works	28	3	2	13	10	13	15	131	69	160	96	256
Furriery	24	12	20	21	49	26	44	57	81	116	194	310
Hats and caps	34	32	126	55	142	70	201	314	369	471	838	1,309
Hosiery and knitting	65	24	170	31	296	50	500	160	534	265	1,500	1,765
Oilskin and waterproof clothing ...	6	...	.....	...	.....	2	7	5	15	7	22	29
Shirts, ties, and scarves	50	15	195	22	325	37	306	92	668	166	1,494	1,660
Umbrellas	7	4	7	4	13	3	33	30	53	41	106	147
Underclothing	95	3	125	6	187	10	223	44	433	63	968	1,031
Wigs and hair work	11	...	10	...	13	...	18	9	25	9	66	75
Total	1,619	288	2,092	486	3,232	595	3,872	4,909	9,312	6,278	18,508	24,786
(c) *Fibrous Materials and Textiles not elsewhere included.*												
Bags and sacks	8	25	40	25	60	22	76	85	95	157	271	428
Rope and twine...	8	12	9	60	10	51	15	87	4	210	38	248
Tents and tarpaulins	14	3	6	2	13	9	15	54	76	68	110	178
Total	30	40	55	87	83	82	106	226	175	435	419	854
Total, Class 7 ...	1,664	404	2,293	622	3,488	728	4,233	5,664	10,168	7,418	20,182	27,600
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	20	9	2	23	1	16	8	77	12	125	23	148
Electrotyping and stereotyping, type founding, and printers' materials	17	11	12	18	13	14	7	88	5	131	37	168
Paper bags and boxes	16	42	145	35	186	39	219	131	279	247	829	1,076
Paper mills, cardboard, and strawboard	7	11	10	38	19	43	27	372	87	464	143	607
Photo-engraving, photo-lithography, and photo. materials	46	8	23	11	52	21	76	103	191	143	342	485
Printing, bookbinding, and manufacturing stationery	326	236	239	450	373	548	425	3,384	775	4,618	1,812	6,430
Total, Class 8 ...	432	317	431	575	644	681	762	4,155	1,349	5,728	3,186	8,914
CLASS 9.—MUSICAL INSTRUMENTS, &C.												
Pianos, organs, and sewing-machines	32	25	1	68	7	92	20	439	26	624	54	678
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	5	5	.....	4	...	2	2	17	1	28	3	31
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY, HARNESS, &C.												
Coaches and waggons	84	11	.....	69	...	79	.....	461	.. ...	620	.....	620
Cycles and motor cars	368	102	1	407	3	390	14	2,392	30	3,291	48	3,339
Perambulators, &c.	8	12	.....	14	2	23	3	119	1	168	6	174
Saddlery, harness, &c.	30	9	.....	11	7	18	7	189	22	227	36	263
Naves, spokes, &c.	2	...	.....	2	.....	10	.....	39	.....	51	.....	51
Whips	2	1	.....	...	.....	...	.....	9	.....	10	.....	10
Total, Class 11 ...	494	135	1	503	12	520	24	3,209	53	4,367	90	4,457
CLASS 12.—SHIPBUILDING FITTINGS, &C.												
Docks and slips	3	...	.....	7	.....	37	.....	207	.....	251	.....	251
Sailmaking	4	...	.....	...	.....	...	.....	33	5	33	5	38
Ship and boat building	24	3	.....	26	.....	55	.....	700	.....	784	.....	784
Total, Class 12 ...	31	3	.....	33	.....	92	.....	940	5	1,068	5	1,073

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 13.—FURNITURE, BEDDING, &C.												
Bedding, flock, and upholstery ...	54	40	29	68	46	95	69	440	234	643	378	1,021
Carpet-sewing	2	1	6	2	3	3	8	10	43	16	60	76
Iron bedsteads	6	27	.....	16	.....	27	.....	208	.....	278	.....	278
Billiard tables	1	...	.....	10	.....	6	1	35	7	51	8	59
Chair making	16	11	.....	22	.....	37	.....	159	1	229	1	230
Furniture and cabinet making—												
European	192	84	.....	376	.....	390	2	1,823	7	2,673	9	2,682
Chinese	34	...	.....	1	.....	5	.....	272	.....	278	.....	278
Bamboo and wicker	10	2	.....	8	1	8	.....	92	2	110	3	113
Picture frames	27	9	2	11	7	20	9	101	30	144	48	192
Window blinds	9	3	7	7	4	9	2	47	27	66	40	106
Total, Class 13 ...	351	177	44	521	61	600	91	3,190	351	4,488	547	5,035
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c. ...	18	16	31	11	46	13	61	73	62	113	200	313
Chemical works and drugs	61	34	72	41	76	44	153	348	207	467	508	975
Fertilisers	6	...	.....	1	.....	...	.....	40	.....	41	.....	41
Perfumes and essences...	17	9	10	20	29	20	45	60	50	109	134	243
Paints and varnishes	20	45	5	63	12	48	9	406	30	562	56	618
Other minor works	2	...	.....	1	2	2	1	7	3	10	6	16
Total, Class 14 ..	124	104	118	137	165	127	269	934	352	1,302	904	2,206
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	26	3	4	13	6	19	9	61	9	96	28	124
Surgical instruments	6	1	1	3	2	5	3	30	4	39	10	49
Other minor works	3	...	.....	2	.....	2	.....	5	.....	9	.....	9
Total, Class 15 ...	35	4	5	18	8	26	12	96	13	144	38	182
CLASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.												
Electroplating	32	22	7	34	10	31	3	167	8	254	28	282
Jewellery	71	19	6	28	27	98	31	434	55	579	119	698
Total, Class 16 ...	103	41	13	62	37	129	34	601	63	833	147	980
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	102	75	11	232	25	316	59	877	66	1,500	161	1,661
Electric light and power works* ...	70	...	.....	5	.....	4	.....	398	.....	407	.....	407
Gas works	7	3	.....	6	.....	12	.....	1,117	.....	1,138	.....	1,138
Lamps and gas mantles	6	2	.....	4	22	5	36	34	25	45	83	128
Hydraulic power	2	...	.....	...	.....	6	.....	44	.....	50	.....	50
Coke works	3	2	.....	3	.....	5	.....	81	.....	91	.....	91
Total, Class 17 ...	190	82	11	250	47	348	95	2,551	91	3,231	244	3,475
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy leather	19	6	37	13	45	8	65	76	74	103	221	324
Leather belting	6	4	.....	4	.....	4	.....	43	.....	55	.....	55
Portmanteaux	11	41	17	31	28	41	26	170	31	283	102	385
Other minor works	26	18	31	21	24	25	26	96	43	160	124	284
Total, Class 18 ...	62	69	85	69	97	78	117	385	148	601	447	1,048
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting...	5	...	.....	...	1	11	...	67	11	78	12	90
Brooms, brushes	26	25	23	28	17	46	21	163	34	262	95	357
Florists and seedsmen	7	3	9	2	8	1	11	21	9	27	37	64
Laundries—European†	126	1	51	3	144	10	228	196	1,048	210	1,471	1,681
Chinese	21	...	.....	...	.....	...	1	25	2	25	3	28
Rubber goods	9	29	19	40	46	73	113	604	341	746	519	1,265
Toys	26	16	7	26	17	21	14	56	15	119	53	172
Painting and sign-writing	11	3	1	16	1	21	3	418	.....	458	5	463
Other minor works	27	11	22	14	23	25	34	117	33	167	112	279
Total, Class 19 ...	258	88	132	129	257	208	425	1,667	1,493	2,092	2,307	4,399
Total, All Industries ...	6,868	2,949	3,893	6,166	6,100	7,753	7,794	54,774	16,344	71,642	34,131	105,773

*These figures include 62 electric lighting plants for picture shows, employing 71 persons.
†Charitable institutions doing outside laundry work are now included in the number of factories registered.

Appendix V.

Persons employed, by Class of Factory—1920-24.

Class of Factory.	1920.	1921.	1922.	1923.	1924.
METROPOLITAN DISTRICT.					
I. Treating raw material, product of pastoral pursuits	2,502	2,185	2,390	2,246	1,959
II. Oils and fats—animal, vegetable, &c.	735	849	862	764	696
III. Processes relating to stone, clay, glass, &c.	6,724	5,210	5,500	5,768	5,801
IV. Working in wood	4,567	4,259	4,819	5,098	5,063
V. Metal works, machinery, &c.	14,856	14,185	14,684	16,611	1,7445
VI. Connected with food and drink, &c.	14,397	13,775	14,437	13,857	14,731
VII. Clothing and textile fabrics, &c.	25,600	26,145	28,585	27,393	27,600
VIII. Books, paper, printing, engraving, &c.	7,252	7,444	8,001	8,608	8,914
IX. Musical instruments, &c.	563	472	638	686	678
X. Arms and explosives	30	17	22	32	31
XI. Vehicles and fittings, saddlery, harness, &c.	3,540	3,371	4,051	4,602	4,457
XII. Ship and boat building, &c.	2,968	1,869	1,150	1,760	1,073
XIII. Furniture, bedding, &c.	4,439	3,924	4,498	4,731	5,035
XIV. Drugs, chemicals, and by-products	2,173	2,085	2,207	2,129	2,206
XV. Surgical and other scientific instruments	146	155	184	187	182
XVI. Jewellery and plated-ware, &c.	975	861	891	787	980
XVII. Heat, light, and power	3,497	3,279	2,557	3,120	3,475
XVIII. Leatherware (excepting saddlery and harness)	1,079	1,147	1,249	1,055	1,048
XIX. Minor wares, n.e.i.	3,810	3,927	3,965	3,922	4,399
Total	99,853	95,159	100,690	103,356	105,773
NEWCASTLE DISTRICT.					
I. Treating raw material, product of pastoral pursuits	133	177	131	165	196
II. Oils and fats—animal, vegetable, &c.	175	219	195	176	179
III. Processes relating to stone, clay, glass, &c.	507	431	382	415	480
IV. Working in wood	1,424	1,396	1,347	1,525	1,457
V. Metal works, machinery, &c.	6,089	6,587	2,490	5,738	6,209
VI. Connected with food and drink, &c.	1,221	1,283	1,273	1,294	1,361
VII. Clothing and textile fabrics, &c.	1,209	1,269	1,366	1,203	1,104
VIII. Books, paper, printing, engraving, &c.	272	280	260	324	342
IX. Musical instruments, &c.	8	7	8	7	10
XI. Vehicles and fittings, saddlery, harness, &c.	377	354	392	404	394
XII. Ship and boat building, &c.	99	101	55	62	39
XIII. Furniture, bedding, &c.	205	218	209	223	243
XIV. Drugs, chemicals, and by-products	42	43	80	88	128
XV. Surgical and other scientific instruments	..	5	5	6	4
XVI. Jewellery and plated-ware, &c.	23	30	16	16	13
XVII. Heat, light and power	570	774	263	795	800
XIX. Minor wares, n.e.i.	157	130	99	128	144
Total	12,511	13,304	8,571	12,569	13,103
REST OF STATE.					
I. Treating raw material, product of pastoral pursuits	339	371	381	496	386
II. Oils and fats—animal, vegetable, &c.	19	26	22	30	27
III. Processes relating to stone, clay, glass, &c.	1,473	1,494	1,329	1,795	1,699
IV. Working in wood	2,216	2,238	2,261	2,659	2,563
V. Metal work, machinery, &c.	2,526	2,080	2,150	2,648	2,467
VI. Connected with food and drink, &c.	2,713	3,010	3,024	3,021	3,499
VII. Clothing and textile fabrics, &c.	1,408	1,467	1,495	1,553	1,606
VIII. Books, paper, printing, engraving, &c.	650	703	681	738	738
XI. Vehicles and fittings, saddlery, harness, &c.	1,390	1,547	1,439	1,505	1,597
XII. Ship and boat building, &c.	.....	.....	.....	.....	.....
XIII. Furniture, bedding, &c.	120	126	124	156	141
XIV. Drugs, chemicals, and by-products	3	28	46	80	75
XV. Surgical and other scientific instruments	1	3	2	2	1
XVI. Jewellery and plated-ware, &c.	4	13	12	13	10
XVII. Heat, light and power	677	700	718	781	838
XIX. Minor wares, n.e.i.	142	115	132	159	193
Total	13,681	13,921	13,816	15,636	15,840
STATE.					
I. Treating raw material, product of pastoral pursuits	2,974	2,733	2,902	2,907	2,541
II. Oils and fats—animal, vegetable, &c.	929	1,094	1,079	970	902
III. Processes relating to stone, clay, glass, &c.	8,704	7,135	7,211	7,978	7,980
IV. Working in wood	8,207	7,893	8,427	9,282	9,083
V. Metal work, machinery, &c.	23,471	22,852	19,324	24,997	26,121
VI. Connected with food and drink, &c.	18,331	18,068	18,734	18,172	19,591
VII. Clothing and textile fabrics, &c.	28,217	28,881	31,446	30,149	30,310
VIII. Books, paper, printing, engraving, &c.	8,174	8,427	8,942	9,670	9,994
IX. Musical instruments, &c.	571	579	646	693	688
X. Arms and explosives	30	17	22	32	31
XI. Vehicles and fittings, saddlery, harness, &c.	5,307	5,272	5,881	6,511	6,448
XII. Ship and boat building, &c.	3,067	1,970	1,205	1,822	1,112
XIII. Furniture, bedding, &c.	4,764	4,268	4,831	5,110	5,419
XIV. Drugs, chemicals, and by-products	2,218	2,156	2,333	2,297	2,409
XV. Surgical and other scientific instruments	147	163	191	195	187
XVI. Jewellery and plated-ware, &c.	1,002	904	919	816	1,003
XVII. Heat, light, and power	4,744	4,753	3,539	4,696	5,113
XVIII. Leatherware (excepting saddlery and harness)	1,079	1,147	1,249	1,055	1,048
XIX. Minor wares, n.e.i.	4,109	4,172	4,196	4,299	4,736
Total	126,045	122,384	123,077	131,561	134,716

Appendix VI.

Persons employed, by Age Groups—1920-1924.

Metropolitan District.

Year.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		Over 21 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1920	5,842	2,456	3,392	5,201	5,086	6,459	6,948	54,467	15,844	68,583	31,270	99,853
1921	5,934	2,449	3,425	5,341	5,561	6,210	6,934	49,850	15,389	63,850	31,309	95,159
1922	6,367	2,574	3,859	5,456	5,924	7,244	7,542	51,614	16,477	66,888	33,802	100,690
1923	6,573	2,825	3,951	5,585	5,925	7,513	7,645	54,099	15,813	70,022	33,334	103,356
1924	6,868	2,949	3,893	6,166	6,100	7,753	7,794	54,774	16,344	71,642	34,131	105,773

Newcastle District.

1920	936	302	174	732	315	652	337	9,548	451	11,234	1,277	12,511
1921	1,017	194	170	734	323	754	351	10,307	471	11,989	1,315	13,304
1922	1,100	161	181	620	384	730	377	5,671	447	7,182	1,389	8,571
1923	1,171	201	143	800	287	921	342	9,427	448	11,349	1,220	12,569
1924	1,211	173	107	786	271	946	360	10,016	444	11,921	1,182	13,103

Rest of State.

1920	2,967	282	70	660	187	844	211	10,963	464	12,749	932	13,681
1921	3,136	260	70	748	170	861	239	11,111	462	12,980	941	13,921
1922	3,207	257	95	815	217	879	214	10,914	425	12,865	951	13,816
1923	3,314	253	116	957	262	1,040	225	12,305	478	14,555	1,081	15,636
1924	3,480	294	98	915	238	1,126	265	12,404	500	14,739	1,101	15,840

State.

1920	9,745	3,040	3,636	6,593	5,588	7,955	7,496	74,978	16,759	92,566	33,479	126,045
1921	10,087	2,903	3,665	6,823	6,054	7,825	7,524	71,268	16,322	88,819	33,565	122,384
1922	10,674	2,992	4,135	6,891	6,525	8,853	8,133	68,199	17,349	86,935	36,142	123,077
1923	11,058	3,279	4,210	7,342	6,474	9,474	8,212	75,831	16,739	95,926	35,635	131,561
1924	11,559	3,416	4,098	7,867	6,609	9,825	8,419	77,194	17,288	98,302	36,414	134,716

Appendix VII.

Horse-power of Machinery, by Class of Factory and Method of Production, Classified by Industry, 1924

METROPOLITAN DISTRICT.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 1.—TREATING RAW MATERIALS, &c.									
Boiling-down and tallow refining	6	133	98	1	120	60	4	289	235
Glue	1	800	400	...	.....	.....	3	674	465
Tanning	25	496	291	10	356	260	49	2,055	1,520
Woolscouring and fellmongering and packing skins	13	1,940	1,419	1	2	1	17	2,115	1,541
Chaff-cutting	...	...	...	1	8	2	27	630	478
Total	45	3,369	2,208	13	486	323	100	5,763	4,239
CLASS 2.—OILS AND FATS.									
Oil and grease	2	28	25	1	11	10	3	128	89
Soap and candles	4	742	298	...	.....	.....	8	1,722	1,203
Total	6	770	323	1	11	10	11	1,850	1,292
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.									
Asphalt	...	.....	.....	...	.....	.....	6	73	70
Bricks and tiles	31	4,125	2,571	14	1,153	852	39	5,342	3,770
Glass and glass bottles	2	406	351	...	.....	.....	7	953	828
Glass (ornamental)	...	.....	.....	1	5	3	21	308	234
Cement	...	.....	.....	...	.....	.....	5	201	183
Marble and slate	...	.....	.....	2	46	26	10	495	479
Modelling and fibrous plaster	...	.....	.....	...	.....	.....	14	111	102
Monumental masons	1	12	8	...	.....	.....	4	109	86
Pottery and earthenware	5	408	295	4	74	48	7	489	373
Stone-dressing	4	103	91	2	20	15	17	757	641
Other works	1	40	30	3	379	150	16	895	686
Total	44	5,094	3,346	26	1,677	1,094	146	9,733	7,452
CLASS 4.—WORKING IN WOOD.									
Incubators	...	.....	.....	...	.....	.....	1	2	2
Boxes and packing-cases	3	685	565	1	3	3	41	967	770
Cooperage	1	8	5	...	.....	.....	10	296	240
Joinery	6	399	297	23	274	199	170	2,848	2,320
Saw-milling—timber	26	4,661	3,416	2	27	27	47	6,722	4,981
firewood	26	270	199	2	39	39	13	260	248
Wood-turning	...	.....	.....	2	13	8	16	178	160
Other works	...	.....	.....	1	6	6	30	549	437
Total	62	6,023	4,482	31	362	282	328	11,822	9,158
CLASS 5.—METAL WORKS, MACHINERY, &c.									
Agricultural implements	...	.....	.....	3	107	80	8	206	175
Brass and copper	1	230	230	1	4	3	50	565	438
Cutlery	...	.....	.....	...	.....	.....	26	278	241
Engineering	19	2,622	1,481	17	521	332	250	8,898	5,540
Galvanised iron	1	8	6	1	6	6	38	433	345
Iron works, foundries, and boiler-making	4	578	350	9	73	46	100	3,297	2,879
Iron safes and doors	...	.....	.....	...	.....	.....	5	168	118
Lead-mills	1	175	150	...	.....	.....	2	79	44
Railway carriage works	1	140	.....	...	.....	.....	1	68	68
Smelting and ore-dressing	1	32	34	...	.....	.....	4	641	167
Stoves and ovens	...	.....	.....	1	25	15	14	1,309	1,070
Tinsmithing	1	5	5	2	108	63	15	519	434
Wire-working	...	.....	.....	...	.....	.....	15	2,207	2,164
Other metal works	...	.....	.....	4	357	204	71	1,517	1,016
Plumbing	...	.....	.....	..	.....	.....	10	34	32
Farriery	...	.....	.....	1	4	4	18	27	25
Total	29	3,790	2,256	39	1,205	753	627	20,241	14,756
CLASS 6.—CONNECTED WITH FOOD AND DRINK, &c.									
Bacon	4	178	120	...	.....	.....	9	247	203
Butchers' small-goods	9	141	109	22	118	84	451	2,300	2,089
Margarine	1	30	28	1	52	35	2	331	221
Meat-preserving	...	.....	.....	...	.....	.....	3	425	304
Biscuits	2	75	40	1	15	.....	7	1,162	646
Bread and pastry	12	131	77	15	88	69	198	1,290	1,135
Confectionery	7	1,296	1,168	5	93	66	80	2,730	2,158
Corn-flour and oatmeal	1	8	8	...	.....	.....	8	1,107	593
Flour-milling	2	920	770	1	20	15	17	2,388	1,855
Jam and fruit preserving	4	40	3	...	.....	.....	12	398	361
Pickles, sauces, and vinegar	3	55	49	1	18	.....	3	285	234
Dog biscuits and poultry foods	...	.....	.....	...	.....	.....	9	626	510
Self-raising flour	...	.....	.....	1	3	3	4	73	55
Sugar refining	1	179	179	...	.....	.....	1	2,561	2,561
Aerated waters	2	16	14	4	24	11	22	419	377
Brewing	4	3,778	2,341	...	.....	.....	3	2,518	1,742
Condiments, Eastern goods, &c.	3	430	380	4	88	87	29	654	566
Distillery	...	...	.....	...	.....	.....	1	228	228
Ice and refrigerating	12	4,685	3,305	17	1,384	1,074	67	3,626	2,903
Tea-blending	2	17	12	...	.....	.....	13	368	336
Wines and spirits	1	81	45	1	42	20	12	77	66
Tobacco, cigars, &c.	2	948	590	...	.....	.....	6	499	171
Total	72	13,008	9,238	75	1,945	1,464	957	24,312	19,314

Appendix VII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, &c.									
Woollen mills	6	742	661	1	220	180	11	3,089	2,624
Boots and shoes—order and repairing	...	.....	.. ...	9	23	23	420	540	501
factory made	1	250	150	3	127	118	92	1,439	1,304
Clothing—men's slops	...	.....	.....	1	38	38	68	463	435
women's slops	...	.....	.....	...	.....	.....	106	280	258
tailoring	...	.....	.....	...	.....	.....	68	113	99
Corsets	...	.....	.....	...	.....	.....	6	63	52
Dressmaking—mnakers' materials	...	.....	.....	2	10	8	51	126	121
customers' materials	...	.....	.....	...	.....	.....	36	37	35
Dye works	4	38	25	...	.....	.....	18	237	186
Furriery	1	90	60	1	4	3	9	51	40
Hats and caps	3	252	162	...	.....	.....	32	624	543
Hosiery, knitting, &c.	3	23	23	2	5	2	50	743	645
Oilskins and waterproof clothing	1	4	4	...	.....	.....	5	6	6
Shirts, ties, and scarfs	...	.....	.....	1	17	.....	51	292	255
Umbrellas	...	.....	.....	...	.....	.....	7	13	13
Underclothing	...	.....	.....	1	3	2	72	175	156
Wigs and hairwork	...	.....	.....	...	.....	.....	1	1	1
Bags and sacks	...	.....	.....	...	.....	.....	5	312	255
Rope and twine	1	125	125	1	401	320	7	337	307
Tents and tarpaulins	...	.....	.....	...	.....	.....	13	52	45
Total	20	1,524	1,210	22	848	694	1,128	8,993	7,881
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.									
Die-sinking and engraving	...	.....	.....	...	.....	.....	16	75	64
Electro- and stereo-typing, printers' materials, &c.	...	.....	.....	1	6	4	13	237	200
Paper bags and boxes	1	25	25	2	36	30	13	274	238
Paper-mills	2	2,030	1,675	1	73	.....	6	2,975	2,884
Photo.-engraving, photo. materials, &c.	...	.....	.....	...	.....	.....	12	68	60
Printing, bookbinding, and stationery	3	172	112	30	339	244	287	7,777	6,185
Total	6	2,227	1,712	34	458	278	347	11,406	9,631
CLASS 9.—MUSICAL INSTRUMENTS, &c.									
Pianos and sewing-machines	...	.....	.....	...	.....	.....	22	609	592
CLASS 10.—ARMS AND EXPLOSIVES.									
Explosives	...	.....	.....	...	.....	.....	4	34	25
CLASS 11.—VEHICLES, SADDLERY, HARNESS, &c.									
Coaches and waggons	1	8	6	3	23	17	52	521	358
Cycles and motor-cars	2	8	4	18	108	84	294	2,055	1,686
Perambulators	...	.....	.....	...	.....	.....	6	44	41
Saddlery and harness	...	.....	.....	...	.....	.....	15	76	67
Naves and spokes	1	85	85	...	.....	.....	2	185	125
Whips	...	.....	.....	...	.....	.....	...	.....	.....
Total	4	101	95	21	131	101	369	2,881	2,277
CLASS 12.—SHIPBUILDING, &c.									
Docks and slips	3	2,010	2,010	...	.....	.....	2	891	834
Sailmaking	...	.....	.....	...	.....	.....	4	11	11
Ship and boat building	4	298	138	3	47	25	19	453	395
Total	7	2,308	2,148	3	47	25	25	1,355	1,240
CLASS 13.—FURNITURE, BEDDING, &c.									
Bedding and flock	3	76	46	1	3	2	40	677	593
Carpet-sewing	1	8	8	...	.....	.....	5	29	24
Iron bedsteads	...	.....	.....	...	.....	.....	5	416	416
Billiard-tables	...	.....	.....	...	.....	.....	1	119	80
Chair-making	1	50	45	1	4	4	14	199	170
Furniture—European	...	.....	.....	8	87	69	157	2,980	2,535
Chinese	...	.....	.....	...	.....	.....	15	151	136
Bamboo and Wicker	...	.....	.....	...	.....	.....	...	.....	.....
Picture frames	...	.....	.....	...	.....	.....	26	154	133
Window blinds	...	.....	.....	...	.....	.....	8	30	22
Total	5	134	99	10	94	75	271	4,755	4,109
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.									
Blue, baking-powder, soda, &c.	2	14	14	.....	.....	.....	14	562	457
Chemical works and drugs	6	120	50	.....	.....	.....	47	1,199	936
Fertilisers	2	30	18	.....	.....	.....	3	152	129
Perfumes and essences	2	68	29	.....	.....	.....	14	185	124
Paints and varnishes	1	9	7	.....	.....	.....	17	1,880	1,097
Other minor works	1	125	.....	.....	.....	.....	1	150	110
Total	14	366	118	.....	.....	.....	96	4,128	2,853
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.									
Optical instruments	...	.....	.....	...	.....	.....	26	71	56
Surgical instruments	...	.....	.....	...	.....	.....	6	14	14
Other minor works	...	.....	.....	...	.....	.....	3	4	4
Total	...	.....	.....	...	.....	.....	35	89	74
CLASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.									
Electro-plating	...	.....	.....	1	26	16	30	274	249
Jewellery	...	.....	.....	1	5	.....	65	216	177
Total	...	.....	.....	2	31	16	95	490	426

Appendix VII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 17.—LIGHT, HEAT, AND POWER.									
Electrical apparatus	...	.....	.....	1	22	22	91	712	597
Electric light and power works*	2	103,018	53,370	43	1,615	1,170	46	6,537	1,229
Gas	4	3,290	1,567	4	811	608	7	2,494	1,012
Lamps and gas mantles	...	.....	.....	...	.....	.....	4	91	68
Hydraulic power	2	1,820	870	...	.....	.....	1	215	215
Coke works	2	114	84	...	.....	.....	2	728	522
Total	10	108,242	55,891	48	2,448	1,800	151	10,777	3,643
CLASS 18.—LEATHERWARE (EXCEPTING SADDLERY AND HARNESS).									
Fancy leather	2	16	4	...	.....	.....	14	167	112
Leather belting	...	.....	.....	...	.....	.....	6	56	54
Portmanteaux and bags	...	.....	.....	1	14	6	11	91	70
Other minor works	...	.....	.....	1	5	5	19	67	59
Total	2	16	4	2	19	11	50	381	295
CLASS 19.—MINOR WARES (NOT ELSEWHERE INCLUDED).									
Baskets, &c.	...	.....	.....	...	.....	.....	1	6	5
Brooms and brushes	1	12	12	1	16	5	23	144	132
Florists and seedsmen	...	.....	.....	...	.....	.....	5	93	38
Laundries—European	25	389	259	8	57	51	105	1,116	1,001
,, Chinese	...	.....	.....	...	.....	.....	1	5	3
Rubber goods	1	801	561	...	.....	.....	8	1,285	878
Toys	...	.....	.....	2	7	4	17	88	70
Painting and signwriting	...	.....	.....	...	.....	.....	3	5	5
Other minor works	1	8	6	1	8	2	13	124	104
Total	28	1,210	838	12	88	62	176	2,866	2,236
Total, All Classes	354	148,182	83,968	337	9,846	6,988	4,938	122,485	91,493

*NOTE.—These figures include 38 gas plants using 606 h.p., and 35 electric and oil plants using 412 h.p., for lighting purposes at Picture Shows.

Appendix VIII.

Horse-power of Machinery used and Method of Production, by Class of Factory, 1924.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
METROPOLITAN DISTRICT.									
I. Treating raw materials, product of pastoral pursuits	45	3,369	2,208	13	486	323	100	5,763	4,239
II. Oils and fats—animal, vegetable, &c.	6	770	323	1	11	10	11	1,850	1,292
III. Processes in stone, clay, glass, &c.	44	5,094	3,346	26	1,677	1,094	146	9,733	7,452
IV. Working in wood	62	6,023	4,482	31	362	282	328	11,822	9,158
V. Metal works, machinery, &c.	29	3,790	2,256	39	1,205	753	627	20,241	14,756
VI. Connected with food and drink, &c.	72	13,008	9,238	73	1,945	1,464	957	24,312	19,314
VII. Clothing and textile fabrics, &c.	20	1,524	1,210	22	848	694	1,128	8,993	7,881
VIII. Books, paper, printing, and engraving, &c.	6	2,227	1,712	34	458	278	347	11,406	9,631
IX. Musical instruments, &c.	...	...	...	...	...	...	22	609	592
X. Arms and explosives	...	...	...	...	...	...	4	34	25
XI. Vehicles and fittings, saddlery and harness, &c.	4	101	95	21	131	101	369	2,881	2,277
XII. Ship and boat building, &c.	7	2,308	2,148	3	47	25	25	1,355	1,240
XIII. Furniture, bedding, &c.	5	134	99	10	94	75	271	4,755	4,109
XIV. Drugs, chemicals, and by-products	14	366	118	...	...	...	96	4,128	2,853
XV. Surgical and other scientific instruments	...	...	...	...	...	...	35	89	74
XVI. Jewellery and plated-ware, &c.	...	...	...	2	31	16	95	490	426
XVII. Heat, light, and power	10	108,242	55,891	48	2,448	1,800	151	10,777	3,643
XVIII. Leatherware, n.e.i.	2	16	4	2	19	11	50	381	295
XIX. Minor wares, n.e.i.	28	1,210	838	12	88	62	176	2,866	2,236
Total	354	148,182	83,968	337	9,850	6,988	4,938	122,485	91,493
NEWCASTLE DISTRICT.									
I. Treating raw materials, product of pastoral pursuits	1	210	210	...	...	...	14	661	536
II. Oils and fats—animal, vegetable, &c.	3	272	128	...	...	...	2	99	53
III. Processes in stone, clay, glass, &c.	17	813	575	1	29	...	17	791	228
IV. Working in wood	146	4,494	2,972	9	111	70	56	640	483
V. Metal works, machinery, &c.	10	52,113	29,898	8	79	59	48	14,845	6,410
VI. Connected with food and drink, &c.	44	3,023	1,747	41	994	631	173	2,128	1,589
VII. Clothing and textile fabrics, &c.	...	...	.	2	4	3	51	305	151
VIII. Books, paper, printing and engraving, &c.	...	...	...	8	137	96	35	225	194
XI. Vehicles and fittings, saddlery and harness &c.	7	160	147	9	28	22	51	213	186
XII. Ship and boat building, &c.	5	62	41	1	4	2	2	6	4
XIII. Furniture, bedding, &c.	1	8	6	7	77	51	17	189	159
XIV. Drugs, chemicals, &c.	1	30	18	...	...	...	2	24	22
XV. Surgical and other scientific instruments	...	...	...	...	...	...	3	2	2
XVI. Jewellery and plated-ware, &c.	...	...	...	..	...	...	3	13	13
XVII. Heat, light, and power	10	5,616	3,734	19	832	547	46	2,614	1,599
XIX. Minor wares, n.e.i.	3	46	33	2	31	16	5	56	38
Total	248	66,847	39,509	107	2,326	1,497	525	22,811	11,667

Appendix VIII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
REST OF STATE.									
I. Treating raw materials, products of pastoral pursuits	80	1,407	794	12	253	161	25	347	266
II. Oils and fats—animal, vegetable, &c.	6	53	44	...	...	...	...	...	...
III. Processes in stone, clay, glass, &c.	39	10,753	5,981	6	671	616	35	14,105	8,271
IV. Working in wood	397	6,963	5,843	51	747	561	123	1,779	1,358
V. Metal works, machinery, &c.	11	18,720	16,609	27	353	187	56	10,414	7,375
VI. Connected with food and drink, &c.	155	8,914	4,313	196	4,899	3,512	426	4,858	3,603
VII. Clothing and textile fabrics, &c.	2	113	93	12	98	80	66	364	337
VIII. Books, paper, printing, engraving, &c.	2	24	19	47	303	190	121	563	441
XI. Vehicles and fittings, saddlery and harness, &c.	6	115	31	87	688	499	271	1,248	965
XIII. Furniture, bedding, &c.	4	251	128	6	55	48	18	92	70
XIV. Drugs, chemicals, &c.	4	57	16	1	8	4	3	520	366
XV. Surgical and other scientific instruments, &c.	...	...	...	...	...	...	1	1	1
XVI. Jewellery and plated-ware, &c.	...	...	...	1	3	3	2	6	6
XVII. Heat, light, and power	36	9,568	7,549	84	3,470	2,988	119	2,439	1,732
XIX. Minor wares, n.e.i.	10	123	109	4	61	57	11	63	54
Total	752	57,061	41,529	534	11,609	8,906	1,277	36,799	24,845
STATE.									
I. Treating raw materials, product of pastoral pursuits	126	4,986	3,212	25	739	484	139	6,771	5,041
II. Oils and fats—animal, vegetable, &c.	15	1,095	495	1	11	10	13	1,949	1,345
III. Processes in stone, clay, glass, &c.	100	16,660	9,902	33	2,377	1,710	198	24,629	15,951
IV. Working in wood	605	17,480	13,297	91	1,220	913	507	14,241	10,999
V. Metal works, machinery, &c.	50	74,623	48,763	74	1,637	999	731	45,500	28,541
VI. Connected with food and drink, &c.	271	24,945	15,298	310	7,838	5,607	1,556	31,298	24,506
VII. Clothing and textile fabrics, &c.	22	1,637	1,303	36	950	777	1,245	9,662	8,369
VIII. Books, paper, printing, and engraving, &c.	8	2,251	1,731	89	898	564	503	12,194	10,266
IX. Musical instruments, &c.	...	...	...	...	...	...	22	609	592
X. Arms and explosives, &c.	...	...	...	...	...	...	4	34	25
XI. Vehicles and fittings, saddlery and harness, &c.	17	376	273	117	847	622	691	4,342	3,428
XII. Ship and boat building, &c.	12	2,370	2,189	4	51	27	27	1,361	1,244
XIII. Furniture, bedding, &c.	10	393	233	23	226	174	306	5,036	4,338
XIV. Drugs, chemicals, and by-products	19	453	152	1	8	4	101	4,672	3,241
XV. Surgical and other scientific instruments	...	...	...	...	...	...	39	92	77
XVI. Jewellery and plated-ware, &c.	...	...	...	3	34	19	100	509	445
XVII. Heat, light, and power	56	123,426	67,174	151	6,750	5,335	316	15,830	6,974
XVIII. Leatherware, n.e.i.	2	16	4	2	19	11	50	381	295
XIX. Minor wares, n.e.i.	41	1,379	980	18	180	135	192	2,985	2,328
Total	1,354	272,090	165,006	978	23,785	17,391	6,740	182,095	128,005

Appendix IX.

Horse-power of Machinery used and Method of Production—1920–1924.

Year.	Steam.		Gas.		Electricity and other.		Total.	
	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	*No. of Factories.	Horse-power.
METROPOLITAN DISTRICT.								
1920	421	77,695	494	9,618	3,602	58,155	4,517	145,468
1921	382	80,969	432	8,160	3,920	65,009	4,734	154,138
1922	336	76,174	401	7,306	4,258	71,862	4,995	155,342
1923	348	80,287	384	6,906	4,517	80,105	5,249	167,298
1924	354	83,968	337	6,988	4,938	91,493	5,629	182,449
NEWCASTLE DISTRICT.								
1920	235	30,671	113	1,308	290	6,555	638	38,534
1921	229	30,454	117	1,186	334	9,863	680	41,503
1922	204	7,905	119	1,370	391	10,229	714	19,504
1923	210	37,395	121	1,611	425	9,783	756	48,789
1924	248	39,509	107	1,497	525	11,667	880	52,673
REST OF STATE.								
1920	582	29,893	462	7,258	857	7,237	1,901	44,388
1921	594	27,507	490	6,966	933	8,456	2,017	42,929
1922	600	27,180	504	7,931	1,032	10,631	2,136	45,742
1923	651	27,519	486	8,399	1,127	12,108	2,264	48,026
1924	752	41,529	534	8,906	1,277	24,845	2,563	75,280
STATE.								
1920	1,238	138,259	1,069	18,184	4,749	71,947	7,056	228,390
1921	1,205	138,930	1,039	16,312	5,187	83,328	7,431	238,570
1922	1,140	111,259	1,024	16,607	5,681	92,722	7,845	220,588
1923	1,209	145,201	991	16,916	†6,069	†101,996	8,269	264,113
1924	1,354	165,006	978	17,391	†6,740	†128,005	9,072	310,402

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using power.

† Including 85 factories using oil of 1,324 horse-power (Metropolitan District).
" 148 " " 759 " (Newcastle District).
" 604 " " 3,541 " (Rest of State).
" 837 " " 5,574 " (State).

Appendix X.

Employment of Children.

Certificates of Fitness by class of Factory in Districts, 1924.

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Class 1.—Treating Raw Material—the Products of Pastoral Pursuits.									
Tanneries	33	...	...	...	...	...	...	...	33
Wool scouring	3	...	...	...	...	...	...	...	3
Class 2.—Oils and Fats—Animal and Vegetable.									
Kerosene and oil	25	...	1	...	...	...	...	...	26
Soap, &c.	37	30	9	15	...	...	...	...	91
Class 3.—Processes in Stone, Clay, Glass, &c.									
Glass and bottle	46	3	...	...	...	...	...	...	49
Marble and slate	...	...	...	...	...	...	...	...	...
Potteries and bricks	211	2	4	...	...	...	1	...	218
Lime and cement	8	...	1	...	...	...	...	...	9
Class 4.—Working in Wood.									
Sawmills and joinery	174	1	11	...	...	...	11	...	197
Class 5.—Metal Works and Machinery, &c.									
Brass and copper	65	3	1	...	...	...	...	...	69
Engineering	257	2	70	...	1	...	15	...	345
Ironworks, stoves, &c.	136	1	63	...	...	...	4	...	204
Smelting and ore works	1	1	15	...	...	...	14	...	31
Wire works	74	...	13	...	...	...	...	...	87
Class 6.—Connected with Food and Drink, and the Preparation thereof.									
Aerated waters	8	6	2	2	1	...	1	...	20
Biscuits	336	291	5	...	...	...	...	...	632
Bread and pastry	29	4	7	...	1	...	4	...	45
Breweries	...	...	2	...	...	...	...	...	2
Condiments	11	33	...	5	...	...	...	...	49
Confectionery	106	278	...	2	...	...	11	1	398
Flour mills	2	5	1	...	...	...	3	...	11
Groceries and packing	45	84	1	...	...	...	1	...	131
Ice and refrigerating	6	...	3	...	...	...	4	...	13
Jam	14	11	...	...	...	...	...	...	25
Meat preserving	16	...	16	...	...	...	4	...	36
Sugar mills	...	...	...	...	...	...	...	...	...
Tobacco	74	110	...	...	...	...	...	...	184
Class 7.—Clothing and Textile Fabrics, and Fibrous Materials.									
Artificial flowers	...	25	...	...	...	...	...	...	25
Boots and shoes	143	181	...	...	1	...	6	8	339
Calico bags	12	19	1	...	...	...	...	...	32
Clothing	59	564	21	66	...	...	...	5	715
Corsets	2	45	...	...	...	...	...	...	47
Cotton mills	6	15	...	...	...	...	...	...	21
Dressmaking	3	361	...	...	...	...	...	...	364
Hats and caps	64	244	...	3	...	...	...	...	311
Hosiery and knitting	24	201	...	...	...	...	...	...	225
Rope	26	24	...	...	...	...	...	...	50
Shirts	12	227	...	15	...	...	4	1	259
Tents, &c.	7	10	...	...	...	...	1	...	18
Umbrellas	12	12	...	...	...	...	...	...	24
Whiteworking	5	104	...	...	...	...	...	...	109
Woollen mills	70	123	...	...	...	...	6	7	206
Class 8.—Books, Papers, Printing, Engraving.									
Bookbinding	6	141	1	1	...	...	...	...	149
Paper boxes	93	143	...	...	...	...	8	1	245
Paper mills	6	6	...	...	...	...	...	...	12
Photography	13	16	...	...	...	...	...	...	29
Printing	307	76	15	2	1	...	25	...	426
Type founding	12	18	...	...	...	...	...	...	30
Class 9.—Musical Instruments, &c. Pianos, Organs and Sewing Machines.									
Musical instruments	14	...	...	...	...	...	...	...	14
Class 11.—Vehicles and Fittings, Saddlery, Harness, &c.									
Coachbuilding	27	...	5	...	...	...	3	...	35
Motors and cycles	85	1	...	...	...	...	23	...	109
Class 13.—Furniture, Bedding, &c.									
Bedsteads, bedding	31	3	...	...	...	...	...	...	34
Furniture	118	8	16	...	...	...	...	...	142
Class 14.—Drugs, Chemicals and By-Products.									
Chemicals and Blue	77	96	...	...	...	...	...	...	173
Paints and varnishes	52	4	1	...	...	...	...	...	57
Class 16.—Timepieces, Jewellery and Plated Ware.									
Jewellery	68	11	...	...	...	...	...	...	79

Appendix X—*continued.*

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Class 17.—Light, Heat, and Power.									
Electric light, &c.	121	11	3	...	...	...	1	...	136
Class 18.—Leatherware, excepting Harness and Saddlery.									
Leather bags, &c.	111	98	1	...	...	...	...	...	210
Class 19.—Minor Wares not elsewhere included.									
Brooms	30	18	2	...	...	...	...	...	50
Cooperage	...	...	1	...	...	...	...	...	1
Laundries	8	42	...	10	...	...	...	9	69
Plumbers and tinsmiths ...	135	8	1	...	...	...	...	...	144
Rubber goods	39	21	...	...	...	...	...	...	60
Toys	11	5	...	...	...	...	...	...	16
Miscellaneous	37	26	21	...	...	...	...	...	84
Total	3,563	3,772	314	121	5	...	150	32	7,957

Appendix XI.

Accidents by Machinery, 1921-24.

Machines.	1921.	1922.	1923.	1924.
Metal Working Machines—				
Drills	21	12	19	13
Emery wheels	33	39	49	38
Guillotines	5	4	5	2
Lathes	24	21	24	23
Milling	3	3	3	4
Polishing	7	4	...	2
Power presses	31	38	42	37
Riveting	2	2	3	3
Rolling	6	6	10	10
Screwing	1	2	...	2
Shaping	4	3	2	1
Shears	4	7	10	13
Slotting	1	2	...	4
Steam hammers	10	3	3	15
Wire-working	29	47	123	109
Other tinsmiths' machines	3	4	3	...
Other ironworking machines	14	18	18	44
	198	215	314	320
Woodworking Machines—				
Band saws...	7	5	4	6
Boring	8	5	2	3
Circular moulders ...	18	20	21	33
Circular saws	82	95	74	77
Jointers	28	28	35	19
Lathes	4	1	3	1
Planers	12	10	10	36
Other woodworking machines	12	16	15	5
	171	189	164	180
Printing Machines—				
Cardboard box machines	8	...	12	12
Envelope machines ...	3	1	2	2
Guillotines	4	...	1	2
Platens	9	9	11	7
Printing machines ...	10	12	17	15
Wire-stitching machines	4	21	11	19
Other printing machines	8	13	7	13
	46	56	61	70
Food and Drink Machines—				
Biscuit machines	6	4	2	8
Confectionery machines ...	6	5	7	3
Crown corking machines	5	2	...	...
Dough brakes	1	1	8	7
Mincing	3	9	9	10
Mixing	3	2	2	1
Tobacco	4	7	5	10
Other food and drink machines	1	7	9	6
	29	37	42	45

Machines.	1921.	1922.	1923.	1924.
Stone, clay, &c., Machines—				
Brick presses	5	2	5	3
Pans	..	...	...	...
Tile presses	2	1	4	2
Other stone, &c., machines	...	3	1	1
	7	6	10	6
Leather Working Machines—				
Power presses	13	11	5	3
Rolling	3	2	2	...
Shaving	...	1	1	1
Other leather machines ...	1	7	10	5
	17	21	18	9
Clothing Machines—				
Band knives	...	...	1	...
Boot machines	7	6	11	9
Fur-cutting	...	...	...	...
Ropemaking	6	4	1	2
Sewing	10	9	8	8
Wool machines	12	10	9	10
Other clothing machines	2	6	5	2
	37	35	35	31
Laundry Machines—				
Calenders	4	6	8	6
Folding	...	...	...	...
Hydro-extractors ...	...	2	...	...
Ironing	1	4	2	3
	5	12	10	9
Rubber Working Machines—				
Power presses	1	...	...	...
Rolling	...	2	...	5
Other rubber machines ..	2	1	3	7
	3	3	3	12
Brushmaking machines ...	1	1	...	1
Paintmaking machines ...	1	2	...	...
Soapmaking machines ...	2	1	2	5
Miscellaneous Machines—				
Elevators and cranes ...	26	24	30	5,
Engines	9	5	5	5
Fan	1	...	1	1
Mill gearing	48	66	57	87
Other machines	...	13	4	31
	84	112	99	187
Total	601	677	756	869

Appendix XII.

Prosecutions by Districts, 1920–24

Year.	Informations Laid.	Convictions.	Dismissals.	Withdrawals.
		Metropolitan.		
1920	89	85	.....	4
1921	67	62	4	1
1922	46	46	.....	.....
1923	62	61	1	.....
1924	74	72	....	2
		Newcastle.		
1920	25	23	.....	2
1921	11	10	1	... .
1922	6	6	.....	.....
1923	1	1	.....	.....
1924	7	7	.....	.....
		Rest of State.		
1920	5	5	.....	.....
1921	3	3	.....	.....
1922	8	8	.....	.....
1923	7	7	.....	.....
1924	8	8	.....	.....
		The State.		
1920	119	113	.....	6
1921	81	75	5	1
1922	60	60	.....	.....
1923	70	69	1	.....
1924	89	87	.....	2

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1926-27.

LGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

DEPARTMENT OF LABOUR AND INDUSTRY.

REPORT

ON THE WORKING OF THE

FACTORIES AND SHOPS ACT, 1912,

DURING THE YEAR 1925.

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THE TWENTY-NINTH SERIES OF ANNUAL REPORTS BY INSPECTORS APPOINTED UNDER THE FACTORIES AND SHOPS ACT, 1912, FURNISHED TO THE MINISTER FOR LABOUR AND INDUSTRY IN TERMS OF SECTION 19 OF THAT ACT.

The Under-Secretary, Department of Labour and Industry, to The Honorable the Minister for Labour and Industry.

Department of Labour and Industry,

Sir,

I have the honour to forward for submission to Parliament, in terms of section 19 of the Factories and Shops Act, 1912, Annual Reports on the operations of that Act by each of the Inspectors appointed thereunder, for the year ending the 31st December, 1925.

I have, &c.,
F. W. KITCHING,
Under-Secretary

OFFICE OF THE CHIEF INSPECTOR OF FACTORIES AND INVESTIGATION OFFICER.*

Operations.

Report in terms of Section 19 of the Factories and Shops Act, 1912.

Arrangement of Inspectorial Districts.

The provisions of the Factories and Shops Act were extended to cover the whole of the State, as from the 1st July, 1915. The area outside of the Metropolitan District is divided up into Country Districts, and the following statement will show the arrangement of these districts at the close of 1925 :—

District.	Head Centre.	Staff.
Newcastle	Newcastle	Inspector Armstrong. ,, Clark. ,, Darbon. ,, Hastie.
North Coast	Lismore	Senior Inspector Burkitt.
North-Western	Tamworth	Inspector Waugh.
South Coast	Wollongong	,, Wallace.
South-Western	Goulburn	,, McEvoy.
Southern	Wagga	,, Baker.
Western	Orange	Superintending Inspector Huntley.
Broken Hill	Broken Hill	

The Country District Officers, in addition to the work of factory inspection and investigations under the Industrial Arbitration Act, are required to carry out work under the Early Closing Acts as well as that pertaining to the departmental policy of Country Labour Exchanges.

Inquiries emanating from the Immigration Section of the department also devolved upon the Inspectors in both the metropolis and the country.

The following new appointments; interchanges of Inspectors between Metropolitan and Country Districts; and alterations in control of districts were made during the year :—

Mr. Inspector Young was transferred from Broken Hill to the Metropolitan District, and Mr. Superintending Inspector Huntley was placed in charge of the Broken Hill District.

Mr. Inspector Hastie was placed in charge of the North Coast District, which is being worked from Head Office, in place of Mr. Inspector Ogilvie who was transferred to the Metropolitan District.

Mr. Inspector Davis, who took over a district in the Metropolitan area, was replaced by Mr. McEvoy to be in charge of the Wagga District. This district is also worked from Head Office.

Mr. Inspector MacCubbin was appointed, on probation, to the Inspectorate as from the 14th April, 1925, and his appointment was confirmed on the 4th December, 1925.

Mr. Inspector Varley was appointed, on probation, to the Inspectorate as from the 15th June, 1925.

Mr. Inspector Crozier was appointed, on probation, to the Inspectorate as from the 22nd June, 1925.

These new officers were, during the year, attached in their work to experienced Inspectors for instruction and training.

Mr. James Lynch, Inspector of Factories and Shops and Industrial Inspector, resigned as from the 2nd May, 1925.

Statistics.

Cards of instruction served on the occupiers of factories within the Metropolitan District numbered 14,187 for 1925, as compared with 16,288 in 1924; in the Newcastle District, 2,971 in 1925, as against 3,112 in 1924; in the Broken Hill District, 515 in 1925, compared with 650 in 1924; in the rest of the State 4,189, as against 5,183 in the previous year.

---

*Matters covered by the Boiler Inspection Regulations made under Section 62 of the Factories and Shops Act, 1912, are reported upon by the Departmental Engineer and Chief Inspector of Scaffolding and Lifts.

Returns collected from factory occupiers for 1925 show that at the date of collecting the returns (28th November, 1925) 11,836 factories throughout the State employed 138,687 persons, compared with 11,559 factories employing 134,716 persons at the end of 1924, an increase of 277 factories and 3,971 persons. Male employment increased by 2,469, there being an increase of 716 under 21 years of age, and 1,753 over that age. Female employment increased by 1,502, there being an increase of 614 over 21 years of age and an increase of 888 under that age. Of the total persons employed, 100,771, or 72·6 per cent., were male, and 37,916, or 27·4 per cent., were female.

The following statement will show the increase or decrease in the number of factories and persons, males and females, employed therein, from the year 1915, when the whole of the State was brought under the provisions of the Act, to 1925 inclusive :—

Year.	Factories registered.	Increase over previous year.	Persons employed.		Total.	Increase over previous year.		Total.	Percentage of total increase.	
			Males.	Females.		Males.	Females.		Males.	Females
1915	7,425	1,432	70,517	28,706	99,223	7,181	1,901	9,082	79·1	20·9
1916	8,065	640	63,895	28,757	92,652	*6,622	51	*6,571	*100·8	0·8
1917	8,099	34	66,066	29,185	95,251	2,171	428	2,599	83·6	16·4
1918	8,346	247	74,719	31,246	105,965	8,653	2,061	10,714	80·8	19·2
1919	9,003	657	84,474	32,431	116,905	9,755	1,185	10,940	89·2	10·8
1920	9,745	742	92,566	33,479	126,045	8,092	1,048	9,140	88·6	11·4
1921	10,087	342	88,819	33,565	122,384	*3,747	86	*3,661	102·3	2·3
1922	10,674	587	86,935	36,142	123,077	*1,884	2,577	693	*271·9	371·9
1923	11,058	384	95,926	35,635	131,561	8,991	*507	8,484	*105·9	·5·9
1924	11,559	501	98,302	36,414	134,716	2,376	779	3,155	75·3	24·7
1925	11,836	277	100,771	37,916	138,687	2,469	1,502	3,971	62·1	37·9

*Decrease.

The number of effective registrations of factories as at the 31st December, 1925, was 11,981, as compared with 11,754 at the close of the preceding year.

The following statement shows the numerical alteration in factory registrations at 31st December, 1924 and 1925 :—

District.	Registrations effective at 31st December, 1924.	1925.		Increase.	Registrations effective at 31st December, 1925.
		Registrations.	Cancellations.		
Metropolitan	6,961	1,473	1,365	+108	7,069
Newcastle	1,228	176	155	+ 21	1,249
Broken Hill	158	22	21	+ 1	159
Rest of State	3,407	659	562	+ 97	3,504
Total	*11,754	2,330	2,103	+227	*11,981

* Adjusted figures.

The figures in this table are compiled as at 31st December, and therefore differ from the figures in the text following, which are compiled as at 28th November, the date on which the annual returns were collected.

Detailed figures as to the number and classes of factories, number and sex of employees, and horse-power of machinery used in the various districts of the State will be found in the Appendices I to XII.

On the 28th November, 1925, there were 6,947 registered factories in the Metropolitan District, employing 109,824 persons, an increase of 79 factories and 4,051 persons, compared with the figures at the end of the previous year. Of this increase, males represented an increase of 2,454, or 60·5 per cent., and an increase of 1,597 females, or 39·5 per cent., 1,962, or 48·4 per cent., and 608, or 15 per cent., being respectively an increase of males and females over the age of 21 years. Of the total persons employed, males represented 74,096, and females 35,728, or 67·4 and 32·6 per cent. respectively. Only 7,304, or 6·6 per cent., were under 16 years of age; 12,923, or 11·7 per cent., were between 16 and 18 years; 15,909, or 14·4 per cent., were between 18 and 21 years; and the remainder, 73,688, or 67·3 per cent., were over 21 years of age.

Of the total males employed, 3,044, or 4·1 per cent., were under 16 years of age; 6,368, or 8·5 per cent., between 16 and 18 years; 7,948, or 10·7 per cent., between the ages of 18 and 21 years; and the remainder, 56,736, or 76·7 per cent., were over 21 years of age.

Of the total females employed, 4,260, or 11·9 per cent., were under 16 years of age; 6,555, or 18·3 per cent., between 16 and 18 years; 7,961, or 22·2 per cent., between the ages of 18 and 21 years; and the remainder, 16,952, or 47·6 per cent., were over 21 years of age.

It is satisfactory to report that out of a total employment in the Metropolitan District of 109,824 only 7,304, or 6·6 per cent., were under 16 years of age. A comparison of the figures of each sex under and over 21 years of age is somewhat interesting, inasmuch as it demonstrates that, whereas the difference between the number of females of these ages is slight, the excess of males over 21 years of age is large. There were more females than males under 21 years of age employed in the factories in the Metropolitan District, but the males over 21 years of age exceeded the number of females over that age in the proportion of more than 3 to 1.

During the period of 1912 to 1914 the percentages of boys and girls under 16 years of age remained about the same, but for the period 1914 to 1925 the percentage slightly increased, as the following table will show :—

Percentage distribution of persons under 16 years of age.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1912	2·3	2·9	5·2	1919	2·6	3·4	6·0
1913	2·2	2·8	5·1	1920	2·5	3·4	5·9
1914	2·3	2·9	5·2	1921	2·6	3·6	6·2
1915	2·8	3·1	5·9	1922	2·6	3·8	6·4
1916	2·6	3·3	5·9	1923	2·7	3·8	6·5
1917	2·5	3·4	5·9	1924	2·8	3·7	6·5
1918	2·4	3·3	5·7	1925	2·7	3·8	6·5

Taking the males and females under 16 years of age collectively, there was a slight decrease during 1913 over the previous year, but from 1914 to 1925 the percentage gradually increased, equalling in 1915, 1916, and 1917 that for 1920, as the table indicates. The percentage for 1918 was slightly below that for the three previous years, being 5·7 as against 5·9, but for 1923 it was higher than for any year since 1909, when it was 6·8. The percentage for 1925 equals that for the previous year. The tendency seems to be for females to increase steadily, whilst males fluctuate.

The industry class employing the greatest number of persons in 1925 was clothing and textile fabrics, with 29,207, followed by metal works, machinery, &c., with 18,154, and food and drink, &c., with 14,416, these three classes accounting for 61,777 out of a total of 109,824 employed in all classes of factories in the Metropolitan District.

Clothing and textile fabrics showed an increase of 1,607, and metal works, &c., increased by 709, and food and drink decreased by 315 as compared with 1924. The decreases in employment were in food and drink (315), oils and fats (80), woodwork (27), arms and explosives (8), ship and boat building (113), and jewellery (34).

The following statement will show the increase or decrease in persons, males and females, from 1915, when the Act was first extended to the whole State, to 1925 inclusive :—

Year.	Persons employed.			Increase over previous year.			Percentage of total increase.	
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
1915	54,891	26,438	81,329	.....	.....	.....	.....	.....
1916	47,378	26,649	74,027	*7,513	211	*7,302	102·9	2·9
1917	48,927	27,223	76,150	1,549	574	2,123	72·9	27·1
1918	55,355	29,145	84,500	6,428	1,922	8,350	77·0	23·0
1919	62,030	30,309	92,339	6,675	1,164	7,839	85·2	14·8
1920	68,583	31,270	99,853	6,553	961	7,514	87·2	12·8
1921	63,850	31,309	95,159	*4,733	39	*4,694	*100·8	·8
1922	66,888	33,802	100,690	3,038	2,493	5,531	55·0	45·0
1923	70,022	33,334	103,356	3,134	*468	2,666	117·5	*17·5
1924	71,642	34,131	105,773	1,620	797	2,417	67·0	33·0
1925	74,096	35,728	109,824	2,454	1,597	4,051	60·5	39·5

* Decrease.

The following table shows the increase or decrease in number of factories and persons employed therein during the same period :—

Year.	Number of factories.	Increase over previous year.	Persons employed.	Increase over previous year.
1915	4,758	.....	81,329	.....
1916	4,814	56	74,027	*7,302
1917	4,799	*15	76,150	2,123
1918	4,942	143	84,500	8,350
1919	5,330	388	92,339	7,839
1920	5,842	512	99,853	7,514
1921	5,934	92	95,159	*4,694
1922	6,367	433	100,690	5,531
1923	6,573	206	103,356	2,666
1924	6,868	295	105,773	2,417
1925	6,947	79	109,824	4,051

* Decrease.

Total increase—2,189 factories, 28,495 persons.

As at 28th November, 1925, 1,245 registered factories in the Newcastle District employed 12,769 persons, of whom 11,618, or 90·1 per cent., were males, and 1,151, or 9·9 per cent., were females. 60·1 per cent. of the females employed in the Newcastle District and 17·3 per cent. of the males were under 21 years of age. The large percentage of adult male employment was due to a great extent to the number employed at the steel and iron works of the Broken Hill Proprietary Company, Limited, at Port Waratah, Rylands Bros. (Aust.) Limited, The Commonwealth Steel Products, Limited, and other large works, aggregating 5,874, or 50·5 per cent. of the total number of males over 21 years of age.

In the remainder of the State, there were on 28th November, 1925, on the records of the Department, 3,644 registered factories, employing 16,094 persons, of whom 15,057, or 93·5 per cent, were males, and 1,037, or 6·5 per cent., females. This was an increase of 164 factories and an increase of 254 persons, as compared with 1924.

Horse-power of Machinery.

At the end of the year 1925, 9,432 factories throughout the State were using machinery equal to 326,229 horse-power.

Steam power, representing 171,180 horse-power, was used in 1,306 factories; gas power (17,653 horse-power) in 901 factories; electricity and other (137,396 horse-power) in 7,225 factories.

Child Labour in Factories.

Two hundred and thirty-seven children under 14 years of age (173 boys and 64 girls) were granted the special permission of the Minister to engage in factory employment. Eight thousand one hundred and fifty-two children were certified as physically fit for employment in certain classes of factories, and the examining Medical Officer declined to certify in four cases.

Following is a table showing the distribution of the foregoing permits and certificates in the districts in which the State is divided for departmental purposes:—

District.	Permits granted.			Certificates of Fitness.	
	Special (to children between 13 and 14 years of age).			Issued.	Declined.
	Males.	Females.	Total.		
Metropolitan	166	63	229	7,551	4
Newcastle	6	1	7	427	.....
Broken Hill	1	.....	1	9	.....
Rest of State	.....	.....	.....	165	.....
Total	173	64	237	8,152	4

By way of comparison, the numbers of special permits granted during the last ten years are shown hereunder, and the allocation of the children who were granted certificates into the various industries is shown in Appendix X.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1916	162	14	176	1921	125	44	169
1917	115	28	143	1922	116	61	177
1918	134	31	165	1923	152	74	226
1919	200	37	237	1924	160	58	218
1920	142	38	180	1925	173	64	237

New Industry.

During the year the Australian Linoleum Company, Limited, erected a large factory on a site with a frontage of 700 feet to the Duck River at Auburn. The site covers an area of 5½ acres, and part of the factory is four storeys in height. It is built of fire-resisting material and covers an area of 27,000 feet. The drying stoves, wherein the linoleum is kept to mature under heat, are comprised of four brickwork chambers, each of these being 130 feet long and 47 feet in height, covered with a steel frame roof, and are capable of handling linoleum 6 feet in width. The other buildings comprise the oil-boiling house, colour building, oxidising house, laboratory and offices.

The machinery used in manufacturing linoleum is very heavy and massive, and the buildings have been constructed for specially heavy loading throughout.

The manufacturing of linoleum is an intricate and interesting industry, and it is said there are only forty linoleum works in the world.

The mode of manufacture and the secrets of the industry are closely guarded. The main ingredients used in the manufacture are cork, oxidised linseed oil, ochre or other colouring matter, and hessian for the backing, which is usually coloured with a red oxide mixture. This applies to plain linoleums, and in the manufacture of printed linoleum of course various colouring matter is used.

An important feature about this new Australian industry is that it can obtain all the raw material locally with the exception of cork waste and jute hessian.

The cork waste is imported either from Spain, Portugal, or Algiers, and arrives in compressed bales which are broken open and fed into a high-speed disintegrator, and the cork is then broken into uniform size and collected into a cyclone and passes over into a dressing machine where the sand is extracted, and both the sand and the clean broken cork are dropped separately to the next floor.

The clean cork is then fed automatically by gravity through to the next floor through sets of grinding stones. These stones are specially made and require high horse-power to grind the cork into a very fine powder, which is then conveyed to various cork-dressing machines which grade the cork. The cork is then weighed and dropped by gravity to the next floor into a large mixer. Into this machine at the same time is fed the colouring matter and the oxidised linseed oil which contains kauri gum, &c., and is known as linoleum linoxyn cement. After the mass has been thoroughly mixed in this machine, it is discharged and passes through a series of mixing rollers and is finally scratched with a special machine into a granulated mass. It is then passed through a large calender which weighs approximately 125 tons, and the linoleum mass is pressed on to the jute hessian and then taken into the drying stoves where it is hung up in festoons and allowed to dry for a period of weeks according to the thickness of the linoleum. After it has thoroughly matured it is taken down and trimmed ready for despatch.

A special plant is used for the preparation of linoleum cement. The raw linseed oil is subjected to agitation and heat for several hours, and then discharged into beds coated with whiting and allowed to cool. The oxidised oil is then placed into a cement pan and mixed with various gums, &c. After the mixing is thoroughly completed it is discharged on to concrete cooling floors covered with whiting and allowed to cool off. It is again treated with special machinery to ensure that all the ingredients are thoroughly mixed, and when this treatment has been completed it is ready to be sent to the mixing department and fed into the mixer already described.

In the manufacture of printed linoleum the plain linoleum, after it has matured, is sent to the printing flat, where it passes through various types of printing machinery which produce the many well-known patterns on the market. All the colourings are made up in the factory and specially treated to produce the flat finish surface. After the pattern has been placed on the linoleum cloth it is taken back into the drying stoves for the required period and is then ready for despatch.

The company is also making a special noiseless cork linoleum which is specially adapted for covering concrete floors.

Overtime in Factories.

During 1925 the Minister granted applications for extensions of overtime in respect of 34 factories, affecting 654 female employees. Similar permission was granted during the previous year in respect of 35 factories, involving 14 male and 333 female employees, and the figures for 1922 were 18 factories, 3 males and 268 females.

The following table sets out the classes of factory in which the additional overtime was worked :—

Class of Factory.	Factories.	Employees.		Total.
		Male.	Female.	
Class VI—Food and Drink.				
Bottling	1	...	10	10
Confectionery	1	...	8	8
Grocery Packing	1	...	5	5
	3	...	23	23
Class VII—Clothing, &c.				
Boots and Shoes	1	...	4	4
Clothing	1	...	14	14
Corsets	1	...	261	261
Dressmaking	2	...	32	32
Embroidery	1	...	6	6
Hats and Caps	1	...	13	13
Knitting and Hosiery	1	...	124	124
Tailoring	2	...	16	16
Umbrellas	1	...	22	22
	11	...	492	492
Class VIII—Printing, &c.	15	...	95	95
Class XVI—Jewellery, &c.	1	...	5	5
Class XIX—	4	...	39	39
Total	34	...	654	654

Fencing and Guarding of Machinery.

The fencing and guarding of machinery have been given considerable attention during the year and many occupiers have been given instructions to securely fence their dangerous machinery.

Many matters of importance concerning the more effective guarding of machinery have been discussed by the inspectors, and, as a result of such discussion, many problems have been solved and the results applied with great benefit to occupiers and employees. Inspectors have found that "Eternal Vigilance" is the slogan necessary to be kept in mind in connection with this phase of inspectorial work.

Following is an analysis of the reported accidents, and the extent of injuries:—

Extent of Injury.	Accidents Reported.				
	District.				Total.
	Metropolitan.	Newcastle.	Broken Hill.	Rest of State.	
Fatal	10	1	...	4	15
Permanent Injury—					
Loss of arms	2	1	...	...	3
,, hands	1	...	...	...	1
,, fingers or parts	127	11	...	15	153
,, leg	1	...	...	...	1
,, eye	2	...	...	...	2
,, foot or part	1	...	...	...	1
Temporary Injury—	134	12	...	15	161
Gas poisoning	...	...	...	...	...
Burns, scalds, &c.	70	29	...	7	106
Cuts, lacerations, bruises—					
On hands	313	134	...	24	471
,, arms	37	21	...	3	61
,, body	23	25	...	3	51
,, feet	7	7	...	...	14
,, head	30	36	...	6	72
Other	3	...	...	...	3
	483	252	...	43	778
Total	627	265	...	62	954

The following statement gives the distribution of accidents as due to machinery or other causes. Appendix XI contains details of machinery at which accidents happened.

Causes of Accident.

Machinery—

				Miscellaneous—	
Metal working	317	Paper, printing	93	Mill gearing	82
Woodworking	159	Leather	16	Engines	2
Stone, clay, &c.	3	Rubber	4	Elevators, conveyors, &c.	33
Food and drink	40	Other	42	Fan	2
Clothing, &c.	19				

Other Causes.

Dangerous substances—		Electricity	8
Steam	2	Chemicals	3
Hot substances—		Gas	6
Water	8	Other	17
Metal	66		
Other	32	Total	954

The accidents which resulted fatally are briefly described as follows:—

An employee at a vineyard was working with a methylated spirit blow-pipe. In priming it, the flame came in contact with a tin of spirit and caused an explosion and ignited the man's clothing. He suffered such severe burns that he died the following day.

A labourer in a foundry, in cleaning out a fire-box, was using an electric lamp attached to an armoured rubber flex. The insulation was frayed inside the socket cover of the lamp and the live wire came in contact with the brass socket and passed from there to the metal armour of the flex. A current of 200 volts passed through the employee's body causing almost instant death.

An employee in a rubber works was working on a hydraulic accumulator containing water at a pressure of 750 lb. to the square inch. Through a faulty flange, the accumulator burst and a large weight, falling a distance of 6 feet, crushed the man's body between it and one of two concrete piers upon which it rested when in the down position.

A man engaged in a boiling-down works was required to bail out waste liquid from the boiling-down vats. He was standing on a platform doing so and by some means overbalanced into the boiling liquid, being so severely scalded that he died the same day. As a result of an inspectorial inquiry an iron bar was placed across the inside of the vat which should have the effect of preventing a similar mishap.

An employee of the City Council was found dead behind a large transformer in the Power House. From his position and the implements in his hand when the body was discovered, it is assumed that he was cleaning dust from the transformer and, apparently, overbalanced and came in contact with one of the conductors.

A "middleman" in a bush sawmill met his death under the following strange circumstances:— A bolt of a patent fastener upon a large driving belt broke and caused an extra strain upon two other fasteners. The latter tore away from the belt and the end of the latter struck the employee on his left side just below the ribs. It inflicted severe internal and external lacerations which proved fatal.

A beltman at a large cement works was tying a belt on to the pulley of a stationary elevator with a piece of rope. One end of the rope caught in the intake of the driving cogs of an adjacent moving elevator and the employee was by this means drawn in. His arm was crushed and he died in hospital immediately following an operation to remove it.

At a country chaff-cutting plant a 4-inch belt conveying power from the driving shaft to a "ramming" machine slipped off the pulley of the latter. A partner in the plant grasped the belt to prevent its lapping round and becoming broken, and his arm and leg were caught with the result that his leg was torn off and his arm broken in several places. He died some days later.

Whilst an overhead crane, driven by a belting and winch, was being operated at a large ironworks, hoisting a block, the wire rope snapped and the block fell, striking an employee, who was fatally injured.

Whilst welding an iron tank from the inside of the tank with an electric arc welding appliance, an apprentice at an ironworks collapsed. When extracted he was found to be dead. There was a mark on his left arm, and medical evidence was of opinion that, owing to his cramped position, he accidentally electrocuted himself with the appliance.

Two employees at an oil company were cleaning out a large oil tank. The method is to fill the tank with water and heat it to 170 degrees. Caustic soda is then put in, and the resultant mixture is aerated by means of an air cock. This was done, and by some means the mixture overflowed and badly scalded one of the men, who later succumbed to the injuries received.

A winchman in a brickworks was fatally injured through being caught in revolving shafting, and being hurled round violently, came in contact with the timber supports carrying the shafting. He was endeavouring to place a bolt on the revolving pulley, and it is surmised that his clothing became caught in a projecting key, with the above result, until his clothing was torn from his body and he dropped to the ground.

A workman employed as "rougher" in a rolling mill, whilst working at the mill inadvertently stepped into a pair of 12-inch revolving bevel pinions. He suffered such injuries, including the loss of his left foot and a compound fracture of his left leg, that he succumbed.

An accident occurred to an employee who was working at a gas-producer plant at a milling works. The foreman stated that he noticed the man leaving his work, and the latter stated that his stomach was full of gas, and he was going to get some fresh air. Shortly afterwards the man fainted, and his condition becoming serious he was removed to the hospital, where he died about three hours later.

An employee at a large ironworks was assisting in the rolling of iron plates when, by some means, his foot was caught in the rolls and his leg was drawn in. It was some ten or fifteen minutes before he could be extracted, and he died shortly after his removal to the hospital.

Means of Escape in Case of Fire.

Owing to the extensive alterations that are constantly being carried out in the City area, much attention has to be given to this phase of inspectorial work and, in co-operation with the Fire Brigade officers, necessary alterations that are required from time to time are quickly put into effect.

Many of the external steel escapes corrode quickly, and it is very necessary to have them scraped, overhauled, and painted at frequent intervals to ensure their maintenance in a safe condition.

The Chief Officer of Fire Brigades maintained his customary close co-operation throughout the year, and certified during that period 97 factories as being provided with satisfactory alternative means of escape.

Prosecutions.

During the year informations for breaches of the Factories and Shops Act and Regulations were laid in 138 cases.

Following are the details :—

		Convictions.	Dismissals.	Withdrawals.	Total.
Section.					
7	Being in occupation of unregistered factory	4	.....	.....	4
20	Failing to keep premises in a cleanly state	8	.....	.....	8
26	Failing to provide seating accommodation	...	.....	1	1
33	Failing to fence dangerous machinery	15	.....	.....	15
38	Failing to report accidents	5	.....	.....	5
41	Employing boy on prohibited machine	5	1	.....	6
43	Breaches of overtime provisions	29	. ....	1	30
45	Employing children under 16 without certificates	18	.....	.....	18
46	Employing between 6 p.m. and 6 a.m.	2	.....	.....	2
49	Working or permitting work in furniture factories after hours	40	1	.....	41
61	Conviction of actual offender	2	.....	.....	2
68	Failing to pay tea-money	2	.....	.....	2
Regulation.					
15	Failing to provide w.c. accommodation	2	1	.....	3
18	Obstructing approach to fire escape	1	.....	.....	1
	Total	133	3	2	138

WALTER I. TAYLOR,
Chief Inspector of Factories and Investigation Officer.

FACTORIES AND SHOPS ACT, 1912—Section 62.

BOILER REGULATIONS.

Annual Report, Period January-December, 1925.

During the year, 182 boilers and 245 other pressure vessels were newly installed and 18 boilers and 13 pressure vessels were discarded. The number of the various types of boilers and other pressure vessels inspected is given in the following table :—

	Inspections.			Vessels.		
	First.	Re-inspections.	Total.	Discarded.	Newly Installed.	Explosions.
Boilers—						
Marine Wetback	2	7	9	.....	.....	.....
„ Dryback	2	36	38	.....	3	.....
Multitubular	18	242	260	1	11	.....
Cornish	11	127	138	.....	4	1
Vertical	166	555	721	4	73	.....
Colonial	86	706	792	12	33	.....
Locomotive, including Portable, Traction and Road Rollers	120	387	507	1	30	1
Water tube	27	403	430	.....	17	.....
Lancashire	3	88	91	.....	.....	.....
Cast-iron Sectional	12	30	42	.....	10	.....
Jackass	1	26	27	.....	.....	.....
Wolff	.....	3	3	.....	.....	.....
Egg-ended	.....	2	2	.....	.....	.....
Other Steam Generators	1	14	15	.....	1	.....
Total	449	2,626	3,075	18	182	2
Other Pressure Vessels—						
Jacketed Vessels	58	754	812	4	34	.....
Cylinders, Drying Drums and Boilers (Steam Heated)	6	260	266	.....	2	1
Air and Water Receivers	103	350	453	3	60	.....
Digestors	10	91	101	1	3	.....
Hot Tables :—Presses, Drying Tables, Cantilever Presses, Patching Tables	43	130	173	.....	41	.....
Autoclave Presses	5	17	22	1	3	.....
CO_2 Cylinders and Purifiers	4	121	125	1	1	.....
Vulcanizers	33	187	220	1	15	1
Calenders, including Mangles	7	90	97	.....	5	1
Steam-heated rolls	1	1	2	.....	1	.....
Desiccators	.....	3	3	.....	.....	.....
Retorts	2	45	47	.....	7	.....
Vegetable steamers	.....	1	1	.....	.....	.....
Copper Coils and Pipe Heaters	19	57	76	2	8	.....
Montejus and Crystallizers	.....	14	14	.....	.....	.....
Vaccum Vessels	.....	15	15	.....	1	.....
Economisers	.....	8	8	.....	.....	.....
Steam Separators	.....	1	1	.....	.....	.....
Stills	3	16	19	.....	1	.....
Sugar Driers	1	5	6	.....	.....	.....
Sterilizers	1	7	8	.....	.....	.....
Oil Receivers	.....	3	3	.....	.....	.....
Superheaters	.....	2	2	.....	.....	.....
Stout and Wine Butts	.....	64	64	.....	.....	.....
Steam-heated Vessels	64	110	174	.....	63	.....
Coolers	.....	19	19	.....	.....	.....
Total	360	2,371	2,731	13	245	3
Grand Total	809	4,997	5,806	31	427	5

Six thousand seven hundred and fifteen reports in connection with the inspection of steam boilers and other pressure vessels were lodged by accredited Inspectors, as follows :—

	Reports received.		
	Boilers.	Other Pressure Vessels.	Total.
Prescribed Reports:—			
First Inspections	449	360	809
Reinspections	2,626	2,371	4,997
Total	3,075	2,731	5,806
Non-prescribed Reports:—			
Internal	592	242	834
External	70	5	75
Total	662	247	909
Grand Total	3,737	2,978	6,715

The following is a summary of notices served upon factory occupiers, to ensure compliance with the requirements of the Boiler Regulations :—

	Boilers.	Other Pressure Vessels.	Total.
Pressure reduced	155	40	195
Pressure increased	25	18	43
Safety valves	24	7	31
Reducing valves	8	2	10
Safety valves to be locked	39	3	42
Pressure gauges	31	6	37
Casing in lever safety valves	.....	.....	.....
Gauge-glass protectors	45	1	46
Water gauges	9	.....	9
Test cocks	8	.....	8
Cocks between check-valve and boiler	2	1	3
Valve on steam connection	1	.....	1
Isolating valves (steam line)	14	.....	14
(blow-off)	6	.....	6
Blow-off cocks	2	.....	2
Patches	.....	.....	.....
Fusible plugs	16	.....	16
Feed pumps	.....	.....	.....
Fire-box screwed stays renewed	91	.....	91
Injectors	1	.....	1
Unclassified	74	3	77
Total	545	81	626

During the year the Minister granted thirteen certificates of approval to inspect boilers and other pressure vessels. One hundred and ninety-six certificates were in force at 31st December, 1925.

Explosions.

The following explosions were reported and investigated by Departmental inspectors during the year ending 31st December, 1925.

1. During February an accident, happily unaccompanied by injury to any person, occurred in connection with a steam-heated ironing machine or mangle while in operation in one of our public hospitals.

The mangle in question comprises six rolls, 12 inches in diameter and 9 feet long. These rolls operate in and are partially embraced by crescent-shaped chambers, which latter are of hollow construction, intended to carry steam at a pressure of 100 lb. per square inch. The parts mentioned are all of cast-iron.

At the time of the accident bed sheets and other articles were being passed through the rolls when a violent explosion occurred, and the room was filled with escaping steam. Later, when the room had cleared of steam, it was found that a large section of plate had been blown out of one of the steam chambers.

Departmental investigation disclosed that the chamber, though of the makers' standard design, was defective in design and construction, and steps have been taken to ensure satisfactory construction in the future.

The form of the exploded chamber, as also that of many pressure vessels, is such that the shrinkage stresses set up upon cooling after cast, and, in addition, those due to internal pressure and temperature cannot be calculated; the only means, therefore, of arriving at a safe working pressure is by means of hydrostatic test to destruction of two or more such vessels, and upon ascertainment of the pressure recorded at the time of failure apply an appropriate factor of safety which will result in the assignment of a safe working pressure for the vessel, having regard also to the material of which they are constructed. Under departmental supervision some such tests have been effected upon local products, and in every case, even involving modification of design, manufacturers have expressed appreciation of the Department's determination to make for more safe conditions.

2. A boiler of the Cornish type installed in a sawmill at Nambucca Heads exploded on the 24th April, 1925. The boiler shell was 5 feet diameter by 24 feet long, and the appliance was fitted with a steam dome and a single furnace, 3 ft. 1 in. in diameter. Inspection of the boiler was made annually since the promulgation of the regulations made under section 62 of the Factories and Shops Act, 1912, by an accredited inspector, whose opinion was that the boiler was well kept and apparently in good condition. The certified working pressure was 65 lb. per square inch, and this pressure has been carried in the boiler for a number of years.

The explosion resulted in the boiler being literally torn to pieces by the forces liberated, and sections of the dismembered boiler were projected some 200 feet from the mill where the boiler had been installed. A brick smoke stack used in connection with the boiler was demolished by the force of the explosion, and the mill buildings were badly damaged.

A notable feature of the occurrence is the extraordinary manner in which the shell plates of the boiler were torn in all directions, while the rivetted seams were little affected. The furnace tube, intact, except that the angle-iron flanges were stripped from the ends, was thrown a distance of about 70 feet, and subsequent inspection disclosed that the furnace plates bore no evidence of having been overheated by shortness of water.

Information furnished by the mill employees was that the water gauge, safety valves, and steam pressure gauge functioned properly on the day of the explosion.

The departmental inspector after investigation reported that, in his opinion, the explosion occurred as a result of plate strength deterioration by crystallisation, due to the lengthy period the boiler had been in use, thereby rendering the plates insufficient in strength to resist the steam pressure carried.

It was ascertained that this boiler had been in service for approximately forty years.

Considering the destructive nature of this explosion, in respect of which further investigation is being pursued, it is a fortunate circumstance that no person was killed, or, with the exception of shock, injured.

3. A large and heavy cast-iron steam-drying vessel at the Cumberland Paper Mills, Lane Cove River, exploded and fell some 12 feet to the floor, fortunately without causing bodily injury to anyone. It is departmentally held that the explosion was caused by water hammer due to a defective syphon pipe. Alterations are being made with a view to preventing a similar occurrence.

4. During November a portable type boiler exploded at the premises of the Standard Portland Cement Co. Ltd., Charbon, *via* Kandos, resulting in injuries being received by two persons.

The crown of the firebox was fractured along the full length of the fillet of flange of the front plate at right angles to the direction of the crown girders. The crown was forced down to an angle of about 45 degrees to its original position, in so doing tearing the firebox side plates. The explosion lifted the boiler off the front wheels and hurled it 50 yards in the direction of its setting, where it turned on its side.

The explosion was caused through the faulty construction of the firebox crown girders, in not being made long enough to transmit the downward force to the vertical plates, thereby submitting the fillet of the plates to a bending strain, setting up grooving—which developed to such an extent that the plate finally fractured.

5. A vulcanizer in a city factory exploded, fortunately unattended by personal injury. The appliance was known as the Harvey-Frost tube slab, and was used for repairing tyre tubes, and had been in use for upwards of four and a half years, no trouble having been previously experienced. A few weeks previously the machine had been inspected by an accredited inspector and a safe allowable pressure of 60 lb. certified. The working pressure of this type of machine ranges between 60 lb. and 75 lb. per square inch, but usually 60 lb., as this pressure produces a useful temperature for their class of work. The maker's rating for the machine is 75 lb. per square inch. No conclusion has so far been arrived at as to the cause of the explosion owing to the completeness with which the boiler section has been broken up, and to the discolouration of the fractured edges of the broken metal. The matter of the inspection and test of this vessel is being taken up with the accredited inspector concerned, and the question of strength design is forming the subject of representations to the manufacturers—a British firm of repute.

The result of this explosion evidences clearly the destructive forces liberated by the sudden release of even a relatively small quantity of water heated to the temperature giving steam pressure of approximately 60 lb. per square inch.

Factories and Shops Act, 1912—*Regulations for the Inspection of Steam Boilers, &c.*

Accredited Inspectors.—Correct as at 31st December, 1925.

In accordance with the provisions of clause 5 of the Regulations of the 10th March, 1916, made under section 62 of the Factories and Shops Act (published in *Industrial Gazette*, vol. 9, p. 815), the Minister had, by the 31st October, 1925, approved of the persons whose names appear hereunder as persons competent to make inspections and carry out all other necessary duties pertaining to the application of such Regulations.

The names appear in groups, comprising persons resident in Sydney and Suburbs, Newcastle and district, and country centres, respectively.

Cert. No.	Name.	Address.	Cert. No.	Name.	Address.
		Sydney and Suburbs.			
190	Adamson, D. J. ...	135 Auburn-rd., Auburn.	21	Connie, P.	275 Henderson-rd., Alexandria.
75	Allen, J. A.	"Dokotoh," Cheltenham and Beecroft roads, Cheltenham.	189	Connie, W. F.....	"Ellerslie," Cliff-rd., Northwood.
182	Allum, S. C.	54 Charlotte-st., Ashfield.	125	Dalby, G. W.	Australian Gaslight Co., Mortlake.
131	Archer, C. S.	18 Gilbert-st., Rose Bay.	212	Davies, A. J.	11 Foucart-st., Rozelle.
27	Armstrong, A. H. ...	Edinburgh-rd., Willoughby.	192	Davies, Wm. G. ...	28 Arcadia-rd., Glebe Point.
141	Arnott, J.	Belgrave-st., Manly.	28	Davis, C. E.	"Booral," Daniel-st., Granville.
34	Arnott, Wm.	9 Glover-st., Mosman.	180	Davis, H. C.	29 Hayden-st., Mosman.
48	Auldjo, L. C.	7 Victoria-st., Ashfield.	153	Denovan, C.	Lyons-rd., Drummoyne.
91	Ausburn, C. H.	39 Hawthorne-parade, Haberfield.	199	Dobson, A. J.	12 Tenilbra-rd., Northbridge.
4	Banyard, T. R.	c/o L. Hinks & Co. Ltd., Engineers, 2 O'Connell-st., Sydney.	211	Donnelley, N. S. ...	42 Dening-st., Drummoyne.
173	Barr, R. H.....	37 Sussex-st., Sydney.	135	Dowser, W. H.	96 Glenmore-rd., Paddington.
204	Barron, W. N.	"Narani," President av., Brighton-le-Sands.	92	Duncan, J.	Queensland Insurance Co., Sydney.
179	Battle, A. E.	Challis House, Martin-pl., Sydney.	53	Elder, Wm.....	6 Dalley-st., Sydney.
172	Bennett, G. T.	"Penryn," Sutherland-crescent, Darling Point.	147	Elgar, T.	Park-rd., Mascot.
84	Bennett, T. G.	Department of Labour and Industry, Sydney.	133	English, W. M.	48 Cook-rd., Centennial Park.
17	Bernard, T.....	17 Lenore-st., Five Dock.	186	Fairclough, C. S. ...	63 Booth-st., Balmain.
9	Berry, J. H.	1 Ballast Point road, Balmain.	167	Fairweather, J.	"Shemara," 1 Day-st., Drummoyne.
149	Bidewell, F. T.	Bruce-st., West Kogarah.	202	Ferguson, W. J. ...	12 Glover-st., Paddington.
166	Brighton, E. J. B.	77 Glenmore-rd., Paddington.	19	Fielder, J.	N.R.M.A., 30 Grosvenor-st., Sydney.
43	Brown, C. J.	St. George's-crescent, Drummoyne.	206	Fogarty, J.	90 Ben Boyd rd., Neutral Bay.
126	Budrodeen, E. S. ...	38 Drummoyne-av., Drummoyne.	108	Foreman, D. W. ...	27 Edward-st., North Sydney.
213	Campbell, A.	Russell-av., Lindfield.	49	Fox, F. C.	56 Hunter-st., Sydney.
105	Campbell, A. N. ...	23 Austenham-rd., Leichhardt.	50	Fraser, H.	"St. Kilda," 10 Allister-st., Cremorne.
181	Chapman, F. J.	37 Dolphin-st., Randwick.	63	Gitzdahl, O. L.	32 Charlcott-st., Dulwich Hill.
62	Chapman, G.	Clara-st., Erskineville.	2	Gregory, R.	Equitable Buildings, George-st., Sydney.
109	Christie, J.	Woodburn-rd., Lidcombe.	61	Grosse, G. C.	29 Avona-av., Glebe Point.
76	Clarkson, E. J.	"The Hut," Seaview-st., Balgowlah.	124	Hall, S. G.	27 Moore-st., Lilyfield.
161	Coleman, J. H.	Chief Mechanical Engineer's Office, Railway Department, Redfern.	79	Hargreaves, R. S. ...	8 Burfitt-st., Leichhardt.
			31	Hastie, J.	Joseph-st., Ashfield.
			38	Hastie, J. N.	Department of Labour and Industry, Sydney.
			157	Holroyde, J. B.	"Bayview," Sisters-crescent, Drummoyne.

Cert. No.	Name.	Address.

Sydney and Suburbs—continued.

52	Hopkins, E. J.	760 Botany-rd., Alexandria.
54	Horne, R.	Bent-st., North Sydney.
134	Hosking, W. J.	67 Day-st., Sydney.
29	Hunter, A. H.	Ferry-st., Hunters Hill.
205	Kennedy, J. M.	56 Kellett-st., Darlinghurst.
136	Kerr, A. E. C.	c/o Miller & Co. Pty., 143 York-st. North, Sydney.
95	Kidd, H.	Cremorne Point, Cremorne.
93	Kirkwood, D.	18 Leopold-st., Croydon.
154	Lawson, D.	14 Thompson-st., Mosman.
1	Lawson, J.	Queensland Insurance Co., Sydney.
187	Lewis, A.	Fourth Floor, Customs House, Sydney
129	Lewis, D. M.	Kingsland-rd., Regent Park, Lidcombe.
8	Macartney, J.	96 Glassop-st., Balmain.
122	Mackie, D.	64 Pitt-st., Sydney.
151	Mackintosh, F.	Condor-st., Burwood.
191	Martin, A. E.	"Bretley," Keers-rd. and Tilba-st., Lidcombe.
193	Mason, A. B.	Department of Labour and Industry, Sydney.
22	Mason, H. D.	35 Pitt-st., Sydney.
7	Massey, G.	Post Office Chambers, Pitt-st., Sydney
39	McDonald, T. W.	"Durham," Rosebury-st., Mosman.
5	McLardy, J. R.	Broderick-st., Balmain.
94	McRoberts, H. A.	Queensland Insurance Co.
51	McSwiney, J.	Union Assurance Co., O'Connell-st., Sydney.
86	Membrey, H. A.	Clyde Engineering Works, Clyde.
44	Mitchell, D.	14 Wyndham-st., Alexandria.
10	Mitchell, S. M.	Mercantile Mutual Insurance Co., Martin-pl., Sydney.
77	Morrison, A.	Pearson-st., Balmain.
174	Nicholls, W.	c/o R. Wildridge & Co., 76 Pitt-st., Sydney.
12	Nicoll, G.	The Crescent, Homebush.
41	Olding, A. C.	c/o Chapman & Co., Darling-st., Balmain.
68	Oliver, R. K.	Yarmouth-rd., Strathfield.
115	Orchard, A. E.	"Camilla," Beresford-rd., Strathfield.
188	Pearson, E. W.	60 Premier-st., Marrickville.
143	Petrie, N.	British Imperial Oil Co., 49 Clarence-street, Sydney.
183	Platt, W. T.	109 Pitt-st., Sydney.
40A	Pritchett, R. W.	56 Margaret-st., Sydney.
67	Rawson, C.	32 Jamieson-st., Sydney.
121	Reeks, R. W.	12 Renwick-st., Drummoyne.
6	Reid, C.	Glassop-st., Balmain.
162	Reynolds, L. J.	Bull's Chambers, Martin-pl., Sydney.
137	Richardson, R.	Woodville-st., Hurstville.
42	Rodgers, S. D.	"Dalmeny," 17 York-rd., Centennial Park.
175	Russell, R.	The Avenue, Granville.
67A	Salmon, N.	84 Hunter-st., Sydney.
45	Savage, J.	36 Tweedmouth-av., Rosebery.
30	Scott, J. J.	10 Alma-st., North Sydney.
156	Scott, W.	"Balgay," Nisbett-st., North Sydney.
139	Scoular, J.	Martin-pl. (late 7 Moore-st), Sydney.
150	Shaw, T. E.	Box 1649, G.P.O., Sydney.
23	Sinclair, J.	30 Glendon-rd., Double Bay.
85	Sinclair, J.	19 Ballast Point rd., Balmain.
132	Sinclair, W.	97 Pitt-st., Sydney.
209	Smeal, K. H.	8 Hazelbank-rd., Wollstonecraft.
177	Smith, C. F.	Department of Works and Railways, Customs House, Sydney.
185	Smith, H. C.	"Lucerne," Cambridge-rd., Drummoyne.
171	Smith, H. D.	"Malua," Fisher's-av., Vaucluse.
89	Smith, J. M.	Peacock Point, Balmain.
208A	Smith, W. H.	"Carinya," Burns-cres., Chiswick.
111	Stephenson, W. F.	Cremorne Point, Cremorne.
194	Stevens, E. R.	183 Liverpool-rd., Ashfield.
128	Stevenson, G.	Point-rd., Northwood.
146	Stevenson, L. D.	East Esplanade, Manly.
58	Stobo, S. E.	"Tavua," McIntosh-st., Gordon.
88	Stowe, F. E.	75 Phillip-st., Sydney.
118	Stronach, J.	Ewenton-st., Balmain'
15	Tate, A. S. W.	Kelsyn Flats, Beetha-rd., Neutral Bay.
210	Taylor, C.	"Bangor," Raven-st., Gladesville.
66	Thomson, J. Sted.	33 Macquarie-pl., Sydney.
13	Totolos, A.	166 Princes-st., Sydney.
16	Treffone, D.	42 Bucknell-st., Newtown.
207	Turner, C.	"Wirringilla," Susan-st., Randwick.
46	Vyle, C.	14 Jones-st., Pyrmont.
178	Weeks, T. E.	"Auvergne," Parramatta-rd., Haberfield.
69	Westcott, H.	Shirley-rd., Wollstonecraft.
160	Wildridge, A. H.	76 Pitt-street, Sydney.
14	Wildridge, R.	76 Pitt-st., Sydney.
83	Williams, A.	Department of Labour and Industry, Sydney.
159	Wilson, A.	35 York-st., Sydney.
148	Wilson, T.	Curlewis-st., Bondi.
203	Wyllie, R.	Owen-st., Bondi.

Newcastle and District.

117	Cameron, T.	11 Rowan-st., Merewether, Newcastle.
100	Clegg, W. E.	c/o Messrs. Goninan & Co., Wickham, Newcastle.
56	Dick, Jas.	20 Fitzroy-st., Mayfield, Newcastle.
74	Dick, Wm.	Fern-st., Islington, Newcastle.
104	Ellis, R. G.	Kerr-st., Mayfield, Newcastle.
165	Fulton, Wm.	25 William-st., Tighe's Hill, Newcastle
200	Gray, T. G.	"The Billows," Carlisle-st., Stockton, N.S.W.
31A	Lowrie, J. A.	Broken Hill Propty. Co., Newcastle.
127	McIntyre, J. P.	Robert-st., Mayfield, Newcastle.
208	Miller, A. H.	76 Church-st., Newcastle.
145	Miller, W. A.	Dredge "Morpeth," Newcastle.
120	Moore, W. E.	Smith-st., Newcastle.
87	Morrison, D. N.	Carrington, Newcastle.
113	Nairn, A. C.	Castlemaine Brewery, Hamilton, Newcastle.
11	Rodgers, J. E.	Church-st. West, Newcastle.
73	Taylor, A.	19 Hudson-st., Hamilton, Newcastle.
47	Webb, H. J.	c/o Messrs. Morison and Pearby Ltd., Carrington, Newcastle.

Country Districts.

North.

98	Ratcliffe, J. R.	Rouchel-rd., Aberdeen.
123	Paul, J. B.	Post Office, Armidale.
198	Wearne, Wm.	Emmaville
158	Craig, H.	Invercll Foundry.
106	Sargeant, J. W.	Shire Hall, Merriwa.
81	Vidler, H. E.	Hill-st., Scone.
170	Sheppard, J.	High-st., Tenterfield.
168	Gaukroger, F.	Tingha.

North Coast.

102	Wood, E. H.	Crane-st., Ballina.
78	Issacs, A. R.	c/o Colonial Sugar Refining Co., Ltd., Broadwater, Richmond River.
71	Smith, E. W.	Coff's Harbour Jetty.
59	Mathews, T. B.	c/o Colonial Sugar Refining Co. Ltd., Condong, Tweed River.
110	Gibson, T.	Glenreagh.
114	Frewin, F. A.	31 Prince-street, Grafton.
72	Oag, J.	Harwood, Clarence River.
184	Wilson, J. A.	Harwood, Clarence River.
152	Cliff, R. C.	c/o Kempsey Electric Light and Power Supply Co. Ltd.
40	Boa, A.	Elliott-rd., Lismore.
57	Guthrie, A.	Clay's Laundry, Lismore.
151	Miller, G.	Pulganbar, *via* Copmanhurst.
65	Woodley, E. H.	Victoria-st., Taree.

South.

80	Laing, T.	North Araluen.
90	Parson, H. W.	North Araluen.
33	Coutts, H. K.	Town Hall, Goulburn.

South Coast.

130	Stewart, J.	Mantle Hill, Moruya.
82	Harrison, G.	Kinghorn-st., Nowra.
35	Jones, S. C.	c/o Electrolytic Refining Co. Ltd., Port Kembla.
103	Sharp, J. W.	Keira-st., Wollongong.

West.

164	Giffin, J.	Proprietary Mine, Broken Hill.
169	McAskill, A. W.	Junction Mine, Broken Hill.
201	Reece, T. A.	Electric Light Works, Broken Hill.
142	Triggs, A. J.	Box 11, Post Office, Broken Hill.
163	Woolcock, H. A.	325 William-st., Broken Hill.
107	Allibon, H.	Deniliquin.
18	Moore, R. M.	Dubbo.
197	Clark, J. C. B.	Mort-st., Lithgow.
26	Parker, E.	Hassam's Wall rd., Lithgow.
138	Donovan, D.	Commercial Hotel, Nyngan.
32	Smith, T. F.	Court-st., West Wyalong.
140	Noble, J. O.	Second-av., Wentworthville.

The following companies have on their respective staffs persons holding the Minister's certificate of approval to inspect boilers, &c., under the Boiler Inspection Regulations :—

Atlas Assurance Co. Ltd., Sydney.
Australian Alliance Assurance Co., Sydney.
Australian Mutual Fire Insurance Society Ltd., Sydney.
British Equitable Assurance Co. Ltd., Sydney.
Colonial Mutual Fire Insurance Co. Ltd., Sydney.
Commercial Union Assurance Co., Sydney.
Co-operative Insurance Co. of Australia Ltd., Sydney.
Eagle, Star, and British Dominions Insurance Co. Ltd., Sydney.
Employers' Liability Assurance Corporation Ltd., Sydney.
Farmers' and Settlers' Co-op. Insurance Co. of Australia Ltd.
Federal Insurance Co. Ltd., Sydney.
Insurance Office of Australia Ltd., Sydney
Liverpool and London and Globe Insurance Co. Ltd., Sydney.
London Guarantee and Accident Co. Ltd., Sydney.
London and Lancashire Fire Insurance Co. Ltd., Sydney.
Manufacturers' Mutual Accident Assurance Assn. Ltd., Sydney.
Mercantile Mutual Fire Insurance Co. Ltd., Sydney.
New Zealand Insurance Co. Ltd., Sydney.
North British and Mercantile Insurance Co. Ltd., Sydney.
Phoenix Assurance Co. Ltd.
Queensland Insurance Co., Sydney.
Royal Exchange Insurance, Sydney.
Royal Insurance Co. Ltd., Sydney.
Southern Insurance Association Ltd., Sydney.
Standard Fire and Marine Insurance Co. of New Zealand Ltd.
Sydney Fire Office Ltd., Sydney.
The South British Insurance Co. Ltd., Sydney.
Union Assurance Society Ltd., Sydney.
Union Marine Insurance Co. Ltd., Sydney.

Mr. Superintending Inspector Armitage reports :—

Registrations.—The same serious defect exists that has existed for years. The owner can erect a building, often of a very indifferent equipment and arrangement, occupy it as a factory and apply for its registration. When erected all its defects appear. At present all construction plans are submitted to all local government bodies, but very rarely is any consideration given for the clauses of the Factories Act. So long as the building provides structural stability there is in many cases no further concern. This does not refer to the very large factories erected in the metropolitan area the plans of which are usually submitted to the Department before erection.

Application has been made for the registration of factories which do not comply with the regulations as regards height, *i.e.*, a minimum of 8 feet, and owing to the nature of the work carried on, these have been refused registration.

Inspectors have taken advantage of that section in the Act in which the Minister can compel the owner or person receiving the rent to make the necessary structural alterations. This has been used to the full extent in the matter of getting fire-escapes in existing buildings.

Sanitation, &c.—It was reported to the Department that some cases of lead poisoning had occurred among the employees in one factory in which the making up of lead is part of the construction of the article manufactured. I found that the man handling the lead, while at his bench would cut tobacco, roll it in his hands, place it in the bowl of his pipe, &c. Also in the same factory no ventilation had been provided. The Inspector induced the occupier to provide extra ventilation and a hot water service. In this country ventilation is one of the main things for health and in former reports this has been fully stressed.

Fencing of Machinery, &c.—Particular attention was given in various districts to the danger of wood-working machines, and with the assistance of continental standards and the published notes of the Federation of Inspectors of the World meeting at Geneva each year a standard of guard for use in wood-working machines that is practically universal has been evolved. The Act at present is weak because we are not invested with the same powers as the English Act to frame regulations for the prohibition of the use of a specially dangerous machine, such as the hand planer with square-headed cutters. The use of this is prohibited in Britain and some of the States of Australia and only a circular cutter is allowed, so that, when the operator does touch the knives, in place of loss of finger or hand, only slight flesh wounds are incurred.

Another dangerous machine is the spindle moulder, to which particular attention has been given, and several guards are in use now in all parts of the world which if used are very effective.

The circular saw guard has often enough been described in previous reports, but several accidents have taken place on account of the riving knife and the guard being too far away from the saw.

In the metal trade the power presses are guarded and the exception is to find one without a guard. A large guilotine which the makers provided with a front clamp which was to act as a guard had sight holes for seeing the work and placing it near the knives. These holes permitted a man's hand to reach the knives and several painful accidents have happened. This has been rectified by covering the holes.

Welfare Work.—There has been a steady advance in the interest in welfare work and in general conditions of labour, which is all part of post-war effort especially stressed by war time conditions.

The up-to-date factory and larger retail shops no longer have the appearance of a quarter of a century ago. Well equipped and staffed, dining rooms, rest room, recreation rooms, clubs and library, doctor, nurse, dentist, &c. are all part of the present day scheme of industrial life which endeavours to make hours of work harmonise with wholesome conditions of living.

Mr. Superintending Inspector Huntley reports :—

My duties being principally indoors entailed my being charged with the domestic oversight and comfort of the metropolitan Inspectors, and kept my hands full. The training of new Inspectors in departmental routine and district work received my close attention, and occupied much time. It was anticipated that these officers would be available to each take charge of a metropolitan district at the commencement of 1926.

The Saturday morning meetings of Inspectors were maintained with sustained interest. With the freedom which comes from use the ground was prepared for further development of this feature. The Inspectors' library was freely used, and should become more valuable with the addition of the latest text-books.

It having been decided that two Inspectors' conferences, only, would, in future, be held yearly, these eventuated in June (three days), and December (four days). Interesting papers upon industrial matters were read and discussed, and addresses were given by Medical Officers and officers of other bodies controlling work analogous to that of the inspectorate. Opportunity was seized, as at former conferences, of the attendance of Branch heads who gave interpretations of difficult matters, and advised as to the most efficient manner of discharging duties to departmental advantage and convenience.

In August I was directed to proceed to Broken Hill to re-organise that district, it being expected that such duty would occupy about three months. I arrived in Broken Hill early in September and relieved Mr. Inspector Young who returned to Head Office.

The situation of the office in Argent-street not making for departmental prominence, I recommended, early, that new premises should be secured in the Government and Town Hall block, and same were opened at 31 Chloride-street during November. They are much more central, more commodious, and better lighted. A counter was fitted, with suitable cupboards to protect documents from the prevailing dust. I took the opportunity to re-organise the Labour Exchange Section of the Department's activities, and at the end of the year the effort was well justified.

In co-operation with the local Medical Officer for Health and the Chief Health Inspector of the local Municipal Council I visited, with them, all the food producing factories of the city, and was so occupied for many weeks. It should be noted that the area of Broken Hill is, roughly, seven miles by four miles, and these factories are spread throughout that area, and had, many of them, to be re-visited several times. The first view of some of these places suggested that prosecution should result, but an understanding . . . which soon came . . . of the difficulties endured owing to dust, lack of deep drainage and shortage of water, prompted a more lenient decision which was aided by the readiness of the occupiers to comply with a better standard. Having regard to all the circumstances such standard was fixed and the work of cleansing was put in hand at once. Under instructions many manure bins were erected, to be emptied of their contents at least once in each week. At the end of the year all local food-stuff factories, in operation, were in a satisfactory condition.

Mr. Senior Inspector Dunleavy reports :—

During the year I was in charge of No. 4 district, which contains a large number of important factories which require constant supervision to ensure that the provisions of the Factories and Shops Act are observed; also due regard is given to the payment of the award wages to the employees.

Registration.—A number of new factories were registered in my district during the year and some of the small factories were cancelled through change of occupiers.

Sanitation and Hygienic Conditions.—I again gave special attention to this phase of factory work and I am pleased to report that vast improvements are taking place from year to year, and in most of the new factories provision is made for up-to-date sanitary conditions, and many of the older ones have had improvements effected. Action was taken against a number of occupiers who disregarded the sanitary provisions of the Act.

Fencing Machinery.—This important feature of factory work requires constant vigilance of the Inspector and I have given instructions to fence machinery to many occupiers. In some instances prosecutions have been instituted against occupiers and they have been fined for non-observance of the provisions of the Act.

Accidents.—A few accidents occurred in my district during the year, but I am pleased to report, no fatal accidents occurred. At one factory a youth lost his arm through trying to put a belt on about 12 feet from the ground whilst the machinery was in motion.

Bakehouses.—Attention by constant supervision has been given to bakehouses and numerous orders to lime-wash have been given to occupiers and where machinery is used to fence it.

Certificate of Fitness.—Every year one finds some occupiers have to be reminded of the previsions requiring persons under 16 years of age to be medically examined and obtain a Certificate of Fitness. I regret to say some occupiers neglect their duty in this respect.

Fire Escape.—Fire escapes still require constant attention especially in the old buildings in the city. Structural alterations are being made from time to time to bring the buildings up to a reasonably modern standard and often the escape provided is made ineffective. During the year attention has been given to such buildings, and with the co-operation of the officers of the Fire Brigades, fire escapes have been either altered, or new ones provided to suit the altered conditions. A number of fire escapes have been repaired and repainted during the year.

Boiler Inspections.—Where an occupier has neglected to have his boilers inspected during the year instructions have been given to him to do so.

During the year I made a few special investigations for the Department. I made a survey relating to the employment of unapprenticed juniors working on moulding machinery in the Metal Moulding Industry.

A dispute arose causing a cessation of work at a large engineering establishment over the employment of an unapprenticed junior. To satisfy both sides a survey was made of the industry and a report furnished to the Special Commissioner of Conciliation.

During the last three months of the year, I acted in the capacity of Superintending Inspector in place of an officer who was doing duty in another part of the State. During that period I made a survey of the industries that are using the paint-spraying processes, to ascertain what was required to safeguard the interests of the employees in respect to risk against fire, and health. In a number of instances provision has been made to exhaust the fumes by mechanical means to the open air and in some cases no provision whatever has been made to carry off exhaust fumes.

On the last day of the year I was engaged in conciliation work at Bulli on the South Coast where a dispute arose between the men employed on road work by the Main Roads Board. A conference was held and an arrangement satisfactory to both sides was agreed to.

Mr. Inspector Bennet reports :—

Registrations.—The interesting feature under this heading is the percentage of applications for the registration of new and more commodius premises, these being in each case a distinct improvement in general design, lighting, ventilation, and sanitation. Several intending occupiers requested inspection of premises proposed to be used for factory purposes. In three instances, due to structural defects—insufficient lighting and ventilation—the premises were condemned. At a later date two of these applicants set up business under highly satisfactory conditions, and expressed gratification at having taken the precaution of having an inspection made by a departmental officer beforehand.

New Industry.—A picture-frame manufacturer installed an up-to-date plant of the latest British mode woodworking machinery for the manufacture of oval-shaped frames, the designs being such as to compete with the best importations. I understand this is the third firm to open up in this industry, and, as far as I am able to judge of the finished article placed beside the imported one, the adventure does not seem to be in vain. One of the machines used is an Australian invention and Australian made, and consists of a metal bench upon which are set two well-guarded circular saws running in ball bearings and of about 12 inches in diameter. Each saw sits on a circular bed and by the slackening of two nuts they can be revolved to any desired angle. The timber to be cut is laid on a table underneath the saws, and the table is raised up to the saws. At one stroke the wood is cross cut and mitred.

Fencing and Guarding of Machinery.—This most important phase of the Act occupied much serious thought and undivided attention. Many large factories extended their operations enormously, which fact necessitated frequent and lengthy discussions with employers, consulting engineers, and architects, and the operator in respect of the most efficient methods of guarding, dispositioning of machinery, light and ventilation, &c. Many night inspections were made, so that the normal night working conditions could be studied and noticeable defects remedied. Three instances will serve to express the importance of this side of the work. Directions served cost these firms respectively sums of £3,500, £750, £500. In each case inspection was made in company with a responsible technical officer of the firm concerned, with the result that every departmental requirement was agreed upon, and the directions carried out with a complete understanding and without delay.

In a big engineering concern vital changes were effected, including the expenditure of some £18,000 in new machinery alone for the turning, boiler, pattern, and joiner's shops. Every machine, which is of British manufacture, is direct coupled to its own electric motor, and this new method of driving has displaced thousands of feet of belting and eliminated overhead shafting and pulleys. The extent of the change may be gleaned from the fact that the cost of power electricity exceeded the sum of £5,000 for the year. Before the remodelling of these works is complete, it is expected that a further sum of £20,000 will be expended.

At a rubber works' new building construction exceeded the sum of £20,000, and new British-made machinery installed therein approaches £25,000 in value. Every machine is electrically driven by its own motor, except the mills, which are connected in sets of three units. Where this obtains, each unit is fitted with a prominent stop button, whereby the power is immediately cut off at its source when the button is pressed. The extensions above-mentioned have resulted in the number of employees being increased by approximately 20 to 25 per cent., and the output by about 40 per cent.

Accidents.—One fatal accident occurred during the year. For the purpose of cleaning a large oil tank, it is filled to a given height with water, the water being raised to a temperature of 170° F. by means of an internal steam coil. Caustic soda is added in two or three lots at intervals, the ultimate resulting mixture not to exceed 1 per cent. caustic. This hot solution is then aerated by injecting air through a finely-perforated cross-shaped pipe, set in the bottom of the tank, which causes effervescence. By inadvertently opening the air-cock too fully and too suddenly, thereby admitting an excessive quantity of air, violent effervescence resulted, and the hot solution overflowed through the manhole at the tank top, fatally scalding the operator on the adjacent platform. After investigation I was able to offer a suggestion whereby a similar occurrence could not happen, viz., by replacing the air-cock with a special type of valve, having a specially-made safety spindle attached. The suggestion was adopted successfully, and later improved upon by the firm's engineer, who, with Departmental approval, added a bye-pass.

Of the non-fatal accidents two occurred in each of which an employee met with an accident at a chain morticing machine. The occupiers were successfully prosecuted for failing to securely fence the machines in question.

Bakehouses.—A number of these were inspected and where directions were given the same were carried out satisfactorily and with promptitude.

Fire Escapes.—Apart from the usual procedure, the following items of interest occurred. In a city building hemmed in on three sides by much taller buildings it was found impossible to provide a fire escape as required by the Chief Officer of Fire Brigades though every avenue was exhausted. Eventually the landlord arranged for the removal of the factory occupier to other premises.

General.—During the year I was called upon to do a considerable amount of relief work in other districts, and while so engaged I investigated two fatal accidents, one in the city and one in the country, and one non-fatal, resulting in the prosecution of the occupier for failure to securely fence a circular saw.

After investigating the country fatal accident above referred to, I addressed two well-attended meetings of employees on Safety First principles by the invitation of the firm and with the consent of the Chief Inspector of Factories. By the enthusiasm of the general manager and the president of the union, a Safety Council with two shift committees were formed and is carrying on excellent work.

Special attention centred in the inspection of the moving machinery exhibits at the Royal Agricultural Show with highly satisfactory results.

Conclusion.—I have no hesitation in stating that factory conditions in the district are on a higher plane as a result of the year's work, and it is with much pleasure that I mention the marked advance in goodwill and co-operation of all interested parties for the improvement of the lot of the worker.

Mr. Inspector Davis reports :—

Registrations.—Several new premises were registered for factory purposes during the past twelve months, mainly small establishments, and many of the registrations applied to the change of occupiers.

Structural Alterations.—A few occupiers of factories found it necessary, on account of expanding trade, to make additions to their premises. When these alterations were completed they were found to be satisfactory, occasioned by the fact that modern conditions were considered prior to commencing this work.

Sanitation.—The sanitary arrangements generally were found fairly satisfactory, therefore it was necessary, in a few instances only, to serve instructions for the remedying of these defects.

Fencing of Machinery.—Attention is constantly required for the efficient fencing of dangerous machinery. Some occupiers do not insist upon guards being kept in proper position when provided, and, in other cases, guards are provided, but are not securely adjusted to their supports. In cases of this kind it was necessary to serve instructions upon the occupiers to comply with the Act.

Fire Escapes.—In buildings where it was necessary to provide alternate means of escape in case of fire, &c., such means were provided, and approved by the Chief Officer of Fire Brigades. Instructions were issued in a few instances to have the external escapes scraped and painted, and to replace all missing screws and bolts, mainly for the purpose of maintaining the said escapes in a perfectly safe condition.

Overtime.—The overtime provisions of the Act were fully complied with, and in no instance was it found necessary to obtain the permission of the Minister for an extension of overtime in excess of thirty days during the past twelve months.

Bakehouses.—Satisfactory conditions were generally maintained, and the instructions issued consisted mainly in limewashing of the bakehouse throughout.

Accidents.—Two fatal accidents occurred in this district. An illustration of unnecessary and dangerous practices adopted by some employees is given in the following account of the cause of one of these accidents. The motive power of the plant is electricity. Examination at the scene of the accident disclosed that a main driving shaft of 4-inch diameter, placed about 9 feet above the ground, was used for that particular portion of the factory for driving brick presses, crushing pans, &c. It also drives two elevators by belt transmission to a counter shaft placed immediately under the roof, with the belt passing through the loft floor through a suitable aperture. The main shaft was 9 feet above the ground level, distance from main shaft to counter shaft 21 feet, with the loft floor intervening 3 feet above the main shaft and 12 feet from the ground. The driving belt from the main driving shaft to counter shaft was a vertical drive, which is not the most satisfactory form of belt transmission, particularly for heavy duty as in this particular case. Investigations disclosed that the driving belt (*i.e.*, from main shaft to counter shaft and driving the elevators) would occasionally slip on the driving pulley, causing the elevators to stop; and it was the practice, a particularly dangerous one, to mount a ladder, conveniently placed, and giving ready access from the ground, to the driving pulley, and, by pressing the belt inwards from both sides while the pulley was revolving, give an impetus to the belt, thereby setting the elevator in motion again. It was stated that the said conditions might occur twice in one day, or, again, it might run satisfactorily for months. Bearing in mind the statement of an eye-witness to the accident that the belt slipped off the pulley on the counter shaft while the employee was engaged trying to start the elevator in the manner described, it is quite feasible, particularly should the elevator be overloaded and moving from a dead weight, that the belt would " ride " on the pulley on the counter shaft, causing it to slip off and fall on the projecting end of the shaft there, causing a corresponding amount of slack belt where the employee would be standing on the ladder. It was also reasonably evident that the employee, in his effort to accomplish his object would be leaning towards the main shaft in a state of balance on an insecure foothold. The fact of the belt becoming suddenly slack would disturb that balance and throw him forward on to the main shaft. At the same time it is quite possible that his hand, in following, would thrust the slack of the belt in towards the intake side of the 10 in. driving pulley, causing the belt to double and grip, gather up the amount of slack, and then instantly break (also causing other damages, as, in this instance, the end of the counter shaft was shown to be considerably bent downwards).

Apart from the foregoing, the surface of the main shaft on which it was assumed that the employee fell (which was 17 inches between the pulley and bearing, and which makes about 160 revolutions per minute) had a rough surface; therefore, it is quite possible for the shaft to seize the employee's clothing, probably about the waist line, and hurl him round the shaft, and in doing so the employee would be hurled in violent contact with the timber supports carrying the main shafting, the ceiling joists to the loft floor 3 feet above, and the broken belt (6 inch) fouled on the pulley. This continued until the major part of his clothing was wrenched from his body, and the body ultimately thrown to the ground.

Careful investigation of this particular portion of the main shaft previously referred to disclosed that the clothing of deceased, consisting of singlet, shirt, and two pairs of trousers (with seams torn) were tightly wound round the shaft, and a portion of the elevator belt also wound tightly round the pulley. When the clothing was removed from the shaft it was disclosed that the key securing elevator belt pulley to the main shaft was protruding slightly, which would be a considerable contributory factor in the cause of the fatality. I am of the opinion that the deceased was fatally injured through his clothing coming in contact with the main driving shaft, being caught by the slightly projecting key, causing same to become tightly wound round the shafting, and ultimately hurling him round with the shaft, and probably bringing him in violent contact with the obstructions previously referred to. (Mr. Inspector Dunwoodie concurred with this opinion. He accompanied me when investigating the cause of the accident.) The fact of the driving belt from the main shaft to the counter shaft having a vertical drive, giving, as it does, the minimum driving effect, renders it difficult to obtain a desirable permanent adjustment, and, under these conditions, the fact of the belt occasionally slipping is quite comprehensive, despite the repeated application of a preparation to compensate for that defect. This entailed some method to make contact readily available between pulley on main shaft and belt to counter shaft, on similar lines to that employed by deceased. Obviously the method thus employed was extremely dangerous, and, in view of that fact, after careful consideration

we were able to submit a simple mechanical device, easily constructed and applied, the application and use of which totally obviated the quite unnecessary and dangerous practice which was previoulsy in vogue.

In the second instance a fourth-year apprentice was working inside an oval benzine tank (9 ft. x 4 ft. 6 in. x 3 ft.) which was in course of construction. There were three sections in the tank, viz., 3 ft. x 3 ft., 3 ft. x 3 ft. 10 in., and 2 ft. 2 in. x 3 ft. A wash-plate was being welded in the centre of the end section of the tank by the apprentice. Another employee held the wash-plate in position for him to weld to the shell of the tank by an electric arc welding plant. The electrode-holder was constructed of a vulcanite handle of $5\frac{3}{4}$ inches long x $1\frac{1}{2}$ inch diameter, with a flat projecting iron bar 6 inches long by $\frac{3}{4}$ inch wide for holding the electrode. All wiring connected with the said holder was throughly insulated. It was ascertained that between 80 and 100 volts were used, which voltage was reduced to about 60 volts whilst welding. Reviewing statements made by the persons working near the tank, there was no direct evidence of any one witnessing the accident, therefore it was reasonable to assume that the apprentice came into contact with the electrode, thereby receiving an electric shock. On account of the wash-plate being welded in the centre of the tank, and the small dimesions of each section, both persons inside the tank were compelled to work in a cramped position in such a confined space. It was quite possible for the apprentice to receive an electric shock through coming into contact with the electrode of the said plant, and the possibility was substantiated by the fact of a "recent burn" on his left forearm being disclosed upon examination of the body by the examining doctor.

Several other accidents were reported. Upon investigation of same the injuries sustained proved to be of a minor nature.

Certificates of Fitness.—The provisions of section 45 and regulation 48 were well observed; consequently it was necessary, in a few instances only, to issue written instructions to obtain the required certificates of fitness at once.

Boiler Regulations.—Where boilers were installed it was satisfactory to note that the occupiers had the boilers examined annually and exhibited the certificate concerning such examination.

General.—Much is being done voluntarily by some occupiers of factories with a view to improve hygienic and other conditions, thereby denoting that the standard of factories generally is on the up grade.

Mr. Inspector Dunwoodie reports:—

Registrations.—Have been normal and confined mainly to change of occupiers. Extension of time was granted in one case to enable the occupier to effect improvements. A noteworthy feature is the tendency of architects and intending occupiers to first consult this Department with regard to the requirements of the Factories and Shops Act, a desirable attitude and one in which there is ample room for expansion. A more general application of such a condition lends itself to a higher and more satisfactory standard being obtained as well as avoiding further alterations often found necessary at a later date.

Structural Conditions.—It has been possible to effect many improvements in some factories by the addition of louvres, resulting in better conditions. Several firms are extending their premises, such extensions being of a modern and satisfactory standard. Room for improvement exists in some of the older factories, but it is difficult of accomplishment, owing to their age. In this respect the assistance of the City Council Building Surveyors' Department has been availed of.

Sanitation.—The general conditions have been reasonably satisfactory, only necessitating occasional instructions to rectify minor defects. In one or two instances additional w.c. accommodation has been provided to cope with the increasing activities of some firms.

Fire Escapes.—In conjunction with the Metropolitan Fire Brigades Officer, supervision in this respect has been consistent. Several new fire escapes have been installed, together with improvements to existing fire escapes. It has been necessary occasionally to see that approaches were kept clear of obstructions.

Bakehouses.—Nothing of an outstanding nature has occurred during the year, the general conditions being satisfactory. Reference has been made to the local Health Officer where circumstances rendered such a course necessary.

Boiler Certificates.—These requirements have been well observed. Only on one or two occasions has it been necessary to instruct occupiers to exhibit the required certificates.

Overtime.—Application has been made in the case of one factory only to work additional overtime, which subsequent investigation showed could be obviated.

Certificates of Fitness.—Only in isolated cases has it been necessary to direct attention to this section of the Act, the importance of which is now being more fully recognised.

Fencing of Machinery.—This important section is one necessitating constant supervision, despite a considerable all-round improvement in the standard obtained. A certain amount of ignorance or disregard is apparent of the latent danger that exists, leading to unnecessary risks being taken. This negligence, unfortunately, is not wholly confined to the occupier. The necessity for constant maintenance and correct adjustment of safety appliances is not readily apparent until an accident occurs, bringing the lesson very forcibly home to the unfortunate sufferer. The principal offenders appear to be confined to the ignorant operator, or those who, from long practice and immunity from accident, continue to take unnecessary risks. Another objectionable trait sometimes met with is the erection of light, flimsy fencing. It is being more generally recognised that the installation of a more serviceable structure is ultimately the most economical, despite its first cost, and it is satisfactory to note the increase in the use of substantial tubular frames, carrying a suitable wire mesh covering dangerous parts. Effort is always directed in the more general application of this method.

Accidents.—There were no fatal accidents during the year. Other accidents, with a few exceptions, have not been of a serious nature, and confined principally to young persons, more particularly in the wire industry. Investigation in nearly all cases indicated the wisdom of more intelligent and earnest co-operation between employer and employee, and amongst the employees themselves in a combined and consistent effort to minimise accident risk. It appears certain that such an effort would be well rewarded by the improvement obtained, and would greatly facilitate the work of this Department.

General.—Operations for the year have been fairly extensive and included many duties other than the supervision of the Factories and Shops Act, fully occupying the whole of one's time. It has been possible to effect several improvements, representing a forward tendency in the general standard. Constant supervision has always been essential, which, assisted by intelligent application, is represented by the fairly general improved trend observed. Difficulty is often experienced in old buildings, which do not readily lend themselves to the adaption of more modern requirements, and is usually confined to the occupier in a small way of business.

Mr. Inspector Durack reports:—

During the early part of the year my time was fully occupied on factory and industrial work, and from the end of April to the close of the year I was also conducting cases for some inspectors before different courts under the Factory, Industrial Arbitration, and Early Closing Acts, after which I was again given special work in connection with Chinese furniture factories under section 49 of the Factories and Shops Act, together with work dealing with the supervision of private labour exchanges.

Registrations.—There were several new registrations of factory premises in addition to re-registrations on change of occupancy and other matters such as extensions of operations of existing firms in separate buildings.

Fencing and Guarding Machinery.—This aspect of my work had my closest attention and in the course of my inspections I found on the whole there was a sincere attempt on the part of occupiers to carry out the directions given at the time of my visits. However, there were a few cases where both occupier and operative showed a decided unwillingness to attend to instructions, notably on dangerous machines, such as spindle-moulding machines and jointer machines, and it was not until prosecutions were instituted that these machines were properly fenced and guarded. The operative raised the objection that he could not see his work with the safety appliance attached, whilst the occupier advanced the argument of a decreased output. However, in justice to the great majority, it may be pointed out that notices have been posted up in conspicuous parts of the factory that guards must be kept on all dangerous machines while in use and in many cases where the guards are not used the penalty is the instant dismissal of the employee.

Sanitation.—The matter of sanitation in factories is ever present in the mind of the inspector as the general welfare of the operatives depends largely on this aspect of factory inspection. During my visits every care was taken to see that a copious supply of good drinking water was provided. Several orders were given for the provision of proper lavatory accommodation, washing facilities and dressing-room accommodation. In fact, everything was done within legal limitations to ensure decent and wholesome surroundings for those whose lot it is to work in factories.

Accidents.—Several accidents of a minor nature occurred during the year and a few serious accidents; resulting in the loss of several fingers in two cases and one in the loss of a hand. These accidents happened on the spindle-moulding and jointer machines. In the first instance the occupier stated that a guard had been procured by him, but was not used by the operative. When the matter of having a guard was discussed, the foreman of the factory admitted that it was lost, so that in this case there was no fault on the part of the machinist. In the case of the accident on the jointer the machinist did not ask for a guard to be provided, and the occupier did not trouble to see that the proper safeguards were used. Both these occupiers were prosecuted and fined.

Fire Escapes.—This section of the Act took up a good deal of my time during the year. In company with the Metropolitan Fire Brigades officer every fire escape in my district has been inspected and carefully examined. Some have been altered, a few of them repaired, and in one instance a fire escape in a large knitting factory was condemned and new steel stairs installed. Care was taken in every instance to see that all passages leading to fire escapes were kept clear of anything that would impede the progress of the operatives in case of a fire occurring on the premises.

Bakehouses.—The bakehouses on the whole were well and cleanly kept, and only in a few instances directions had to be given to limewash the premises. Most of the occupiers made it a rule to limewash the bakehouses once in every three months.

Certificates of Fitness.—This section of the Act has been well observed by occupiers and in no instance have I found a lad under 16 years of age without the necessary certificate.

In the first part of this report I mentioned the matter of special work under section 49 of the Act, and this section being of such a vital nature to the community in general, and Chinese in particular, deserves special treatment in this year's report. The application of section 49 of the Act to furniture factories and and to Chinese establishments particularly, is a matter of the utmost importance to the industry and bears on the whole subject of factory regulation. It would not be difficult to imagine the state of affairs which would exist but for the—unhappily only partial—restriction of unlimited working hours which would prevail in the Chinese section in the cabinet-making trade. The consequential results would be not only disastrous to the Australian manufacturing industry, but socially and otherwise a scandalous example of the low moral level of some of the Asiatics engaged in this industry. My experience during the last year has led me to the conclusion that the Chinese shops did not treat the prohibition section of the Act with much seriousness. This is evidenced by the fact of the large number of convictions obtained in the Courts as the result of proceedings against Chinese defaulters. Chinese, though prohibited from working after 6 p.m., or on Saturday afternoons, or at any time during Sundays, were found in many instances, where trade was evidently good, to be working outside the hours mentioned as though nothing was wrong in their doing so. After months of inspection of the premises in question the practice abated, but in all probability only the most blatant of overtime work is curtailed, since in nearly all cases Chinese workmen were to be found on the premises, "hanging around" their benches, often most suspiciously. I found also that the workmen—Chinese—have their meals and play cards in the vicinity of their benches from which it can be seen that provided only that an inspector's presence in the district is made known, and no doubt an arrangement to this effect exists, with the result that the Chinese are still "hanging around" well-lighted factories, the workmen still in their working clothes or talking or playing a game, or, as in more than one instance, paring their toe-nails on their benches—a not uncommon practice which came within my own observation.

To effectively combat this evil I would most strongly recommend that the section in question be amended at the earliest opportunity. The conditions are such that, in my opinion, drastic measures only will meet the positon.

Mr. Inspector Henstock reports :—

Registrations.—A number of additional registrations were completed during the year, including a large lino. factory in Auburn, which is a well-equipped and modern building. New registrations also included an extensive motor-car factory in Granville district, and in city area, two large buildings comprising a number of tenant factories, principally in the clothing trade. Other registrations were occasioned by change of occupier.

Structural Alterations.—In both city and suburban areas alterations have been made to increase floor space and general conditions to comply with the regulations owing to congestion and to obtain room for additional machinery. Acting in conjunction with architects and builders, good results have been obtained in light, air space and sanitation.

Sanitation.—The conditions in city area are generally satisfactory, but the pan system in large factories in outside suburbs leaves much to be desired. Septic tanks have been installed in one new factory. In a growing factory district like Granville the construction of a proper sewerage system is most essential.

Fencing of Machinery.—Usual attention has been given to the matter of safeguarding machinery and progress is being made in standardising guards to particular types of machines. Iron standards with woven wire guards are replacing the insecure methods of wood battens.

Suggestions for safe working are generally well received, but constant vigilance is always necessary to ensure correct adjustment, this particularly applies to wood-working machinery, power presses and emery wheels.

Accidents.—Several accidents were reported which required careful investigation, but, fortunately, the majority were not serious.

I regret to report a fatal accident occurred at a boiling-down and tallow refining factory. A digester attendant was engaged incidentally with his factory duties, to boil pig feed in a large open tank with steam supplied from factory boiler. Whilst standing on a trolley platform, removing the food into a receptacle, he overbalanced and fell head first into the tank, being so severely scalded that he died a few hours later.

Fire Escapes.—During the year a number of fire escapes were erected, and attention was given to matters of repairs and painting outside iron stairways.

Bakehouses.—Bakehouses generally were well kept and periodical limewashing received attention. New bakehouses were erected at Campbelltown, Fairfield, and other suburban centres, enabling special attention being given to installing hoods and flues with improvement to ventilation. It is satisfactory to find the old type of bakehouse being replaced by the more modern and hygienic building.

Certificates of Fitness.—This section of the Act continues to require attention, and instructions were given to several occupiers to comply with the Act. In some cases the boys had certificates issued in previous employment, but failed to hand in same when obtaining work in another factory. These matters have to be always under observation, in order to see that the provisions of the Act are enforced.

Mr. Inspector McEvoy (Wagga) reports :—

Registrations.—There was a large number of new registrations during the year, a proportion being result of change of occupancy. Included in premises registered was one used for making of woollen good —the first of its kind in the Southern district—also two new flour mills. The majority of premises registered were for work in connection with motor-car repairs, joinery work, and sawmilling operations.

Structural Conditions.—Plans were submitted to the department for the erection of a large building for use as a power-house for generating electricity and to contain a gas-producer plant. Inspection of plans disclosed that compliance with regulation 8 had been overlooked. Attention was directed to requirements of regulation, and the gas-producer plant was isolated from other portion of premises.

Additions and repairs effected to several premises considerably improved lighting and ventilation conditions.

Sanitation.—Only a few towns in my district are sewered; the pan system preponderates; in some instances earth closets are still in use. Occupiers generally keep premises in a fairly clean state; there were cases, however, where it was necessary to serve notices to remove trade and other refuse from proximity of workrooms, also to cleanse closet premises.

Fencing of Machinery.—A considerable portion of my time was devoted to this all important duty. The majority of employers recognise the principle of "safety first" to workmen, and provide efficient fencing to dangerous parts of machinery; others, however, are negligent of their obligations, and I found it necessary to serve a number with instructions to provide and maintain proper fencing and guards to driving belts, fly-wheels, cog-wheels, &c. It is gratifying to report that there was no opposition with respect to instructions given.

Accidents.—Reported accidents were few in number. Investigation of accidents disclosed that the majority occurred at circular saws and jointer machines, causing loss of fingers or portion of fingers to employees. A scalding accident happened at a sawmill. The engine-driver was on a ladder placed against the boiler; the ladder "slipped" and he fell, his arm being caught between boiler and guard cover of water-gauge glass. The strain against guard caused its breakage and also water-gauge glass, and the consequent escape of boiling water and steam severely scalded employee's arm. In no instance did investigation of accidents produce evidence of negligence of employer in regard to requirements of Act.

Certificate of Fitness.—Misunderstanding still exists with respect to employment of persons under 16 years of age, some employers believing that a school exemption certificate permits employment of boys or girls, provided they do not work at prohibited machines mentioned in schedule to section 41 of Act. This misunderstanding caused serving of instructions on a number of employers to obtain the necessary medical certificate of fitness.

Bakehouses.—Fairly satisfactory conditions have been maintained by most occupiers of these premises, but in a few instances it was necessary to serve instructions on occupiers to cleanse their premises.

Fire-escapes.—Inspection with regard to an application to register premises containing three storeys disclosed that a fire-escape had not been provided. Upon occupiers' attention being directed to omission, they had an approved fire-escape erected.

General.—The increased extension of industrial awards and welfare legislation to country districts, and constant supervision of awards, combined with attention to departmental activities not connected with Factories and Shops Act legislation, have prevented my visiting a number of factories in the district during past year.

Mr. Inspector Middlemiss reports :—

Registrations.—A large number of registrations were dealt with during the year. As might be expected, the majority were for comparatively small premises, and were usually not specially built for factory requirements. In some cases, where re-registration of premises previously registered was asked for, it was found possible to secure a higher standard than had previously obtained.

Structural Conditions.—A number of new factory buildings, specially built for the requirements of the occupiers, were registered during the year, and these, generally, were in accord with the most modern hygienic standards. It is, however, regrettable to note that in several instances unnecessary expense was incurred because the requirements of the Factories and Shops Act, with respect to natural ventilation, had not been considered. I have in earlier reports expressed the opinion that the plans of new premises for factory use should in all cases be submitted to and approved by the department. Further, I am of opinion that structural alterations of premises already registered should also be reported by the occupiers to the department, and full particulars of such extensions recorded on the registration form. In several instances, where fire-resisting concrete floors were in use, they proved to be unduly hard and cold. Conditions were subsequently materially improved by the laying of non-conducting material in strips, where the operatives walked or stood.

Fire-escapes.—The standard considered acceptable has been very much raised in recent years, and owing to changes in occupiers and consequent re-registrations, it was found possible to secure improvements of some of the older type of escapes.

Some difficulties were met with where change of occupiers had resulted in fire-escape exits leading to premises not subject to the provisions of the Act. Such difficulties will, in my opinion, only be adequately dealt with when amending legislation demands the provision of fire-escapes in warehouses and general utility buildings where any persons are employed.

In several of the new factories registered the latest approved designs of fire-escapes were adopted, these being enclosed fire tower staircases, of fire-resisting construction, provided with close wire-meshed hand-rails, and with access to fire-escape from all floors through automatically closing fire-resisting doors. The co-operation of the detailed officer of fire brigades was sought in a number of instances, and proved of valuable assistance in securing improved conditions.

Sanitation.—The provision of the necessary sanitary accommodation was found to be fairly satisfactory in most cases, though the condition of some of the accommodation was less so. The continual supervision of both employers and inspectors is required to maintain the hygienic standards necessary for the wellbeing of the persons concerned. In one instance, the conditions were such that after collaboration with the health officer, a firm was prosecuted and a penalty of £10 inflicted.

With respect to ventilation, it is, in my opinion, urgently necessary that standards should be formulated and enforced regarding requisite air changes in factories generally, and also in places where particular processes, involving known health hazards, are carried on. The latest types of instruments for the actual testing of the efficiency of mechanical dust, and fume exhaust and ventilation systems, should, in my opinion, be provided for and used by inspectors.

Accidents and Accident Prevention.—Careful study and attention were given to the many problems of fencing and guarding machinery. Of a number of accidents investigated I found a large percentage was due to what I would term "bad practice." This percentage includes a large number due to the lack of proper supervision of youthful employees. In this connection I would refer to the accidents in connection with the operation of power presses, where a large proportion of junior labour is employed. I found that in many cases approved types of guards were provided, but that the employees were allowed to use the machines with the guards so inefficiently adjusted that accidents occurred.

The majority of the total accidents investigated occurred at the point of operation of the machines, though in one case an employee, by reaching over a solid wooden fence 3 feet in height, was injured by coming in contact with transmission machinery. The machinery where this accident occurred was to be reinstalled in new premises, and the opportunity was taken, on reinstallation, to adopt an improved method of fencing, whereby the transmission shafting and power units were placed entirely behind a rigid pipe-rail fence carried to a height of 6 feet, and panelled with close mesh wire. This method gave improved lighting and positive safety.

As a rule I found that both employers and employees showed an increasing desire to co-operate in securing and maintaining better and safer conditions, and it was in the direction of securing such co-operation that I made particular efforts. I am strongly of opinion that work in accident prevention, and for the elimination of industrial dangers to health, could be enormously assisted by more extensive departmental publicity in the form of bulletins, giving specific information to the general public, and by the publication and enforcement of legalised standards.

The consideration of bad lighting as a factor in accidents and ill-health should in my opinion receive more attention, and provision be made for testing natural and artificial light by the most modern methods and standards.

Bakehouses.—I found bakehouses under my supervision to be fairly satisfactory, though in one case, where the oven was gas-fired from an underground pit, it was necessary to give instructions to provide positive ventilation of the pit. Openings were made at high and low points, ensuring a scavenging air movement, and the air movement tested on completion. I also gave attention to an oven where crude oil is vapourised and used as a heating medium. Although this system makes for almost perfect carburation, it requires careful operation. The gas is highly inflammable, and some safe method should be adopted to ensure the prompt ignition of the gas at the burner, in order to prevent the possibility of an accumulated volume of gas being suddenly ignited in a confined space.

Overtime.—No breaches of the Act came under my notice.

Certificates of Fitness.—A number of employers were warned with respect to their obligations *re* section 45 of the Act, and one employer was prosecuted.

Mr. Inspector Ogilvie reports:—

From January to March my time was occupied on inspectorial work in the North Coast District. In April a metropolitan district was allotted me and later on I gave assistance in another metropolitan district pending the reorganisation of the Inspectorate.

Registrations.—During the year a number of new factories were registered and registrations made owing to change of occupiers.

Structural Alterations.—Only in one case was it necessary for a Minister's order to be served to carry out certain structural alterations. This could have been avoided had the occupier notified the Department beforehand that it was his intention to occupy the premises as a factory.

Overtime.—In one case it was necessary to prosecute an occupier for a breach of section 43 (male employees).

Fire Escapes.—Attention has been given to fire escapes, and, where necessary, means of escape, approved by the Chief Officer of Fire Brigades, have been provided.

Fencing of Machinery.—Attention was paid to the fencing of machinery. Approved guards were fitted to a large number of machines in compliance with instructions issued.

Accidents.—One fatal accident happened in a grinding and milling factory. The employee was engaged as a calciner and came in contact with producer gas and died within three hours.

Not being any witnesses one has to assume as to the cause of the accident: (1) Fitted near the producer is a water seal with a water head of from 2 in. to 3 in. Excessive pressure would break the seal, and if the employee was working near the seal and in a stooping position he would come in contact with the gas. (2) The possibility of standing on the producer platform and removing the feeder lid before shutting off the valve. (3) The possibility of working near the gas cock and the small wooden plug falling from the $\frac{3}{4}$ in. bend allowing gas to escape. (4) Attending to some work inside the oven opening and the gas cock being turned on, thereby allowing the gas to find its way into the oven. (5) Removing burnt umber from the oven and accidentally knocking against the gas pipe which would, in view of gas cock plug being slack, allow the cock to open and the gas to find its way into the oven.

The evidence of material on the floor under the mouth of the rotary oven, together with bucket and shovel, would suggest that the employee was engaged about that particular part. Investigations disclosed that the plug of the gas cock on the gas feed pipe from producer to oven was slack, the handle of which was in a vertical position. In the absence of any evidence to the contrary I am of opinion that contact with this pipe causing vibration would allow the cock to partially open without the knowledge of the employee and his head being in close proximity to the confined space at the mouth of the gas pipe, he could have inhaled gas in a large volume from this source. The finding of the Coroner was that the death of the deceased was due to inhaling carbon monoxide given off at some portion of the plant, but there was not sufficient evidence to indicate from which particular point the gas emanated.

In a sheet metal factory an employee was operating a power press when some metal caught under the plunger. To free the metal he placed his hand under the front of the guard and at the same time unconsciously placed his foot on the treadle. The plunger then descended and severed parts of two fingers.

In a large engineering works an employee was working at a power forming press. As he was removing a length of angle iron, 13 in. x $\frac{5}{16}$ in. x $\frac{5}{16}$ in., from the female die the descending male die came in contact with his fingers severing four fingers at the knuckle joints. The machine in question has a length of 11 feet and is used for bending angle iron from $\frac{1}{8}$ in. thickness. Different types of dies can be fitted to the machine for carrying out different classes of work and several employees can work at the machine at the same time. On this occasion two employees were working at the machine, both doing similar classes of work, with a male and female die fitted to a length of 10 feet. Fitted at side of machine is a pedal for the purpose of releasing the clutch for each stroke. From inquiries made it appears that the employees have a habit of fixing a length of iron to the pedal for the purpose of locking the clutch. On the date of accident the clutch was locked, thereby allowing the employees to feed the machine without tipping the pedal. When the machine is worked without tipping the pedal it has a stroke of eleven to the minute. My opinion is that when the employee was removing the length of angle iron from the female die he misjudged the stroke of the machine and, being in a hurry to remove the iron, his hand slipped over the female die, and before he could withdraw his hand the descending male die came in contact with his fingers. Consideration is being given to the fixing of a safety device to the machine.

Sanitation.—A number of occupiers were instructed to keep sanitary conveniences in a cleanly condition. No sanitary system is automatic, and consequently drains need attention so that they may always be clean. In order to prevent the ingress of foul air from drains, &c., into factories, water traps have been invented but these traps need constant attention or they may become a source of disease rather than a safety. Neglect of a drain is a sanitary fault and will surely beget disease.

Senior Inspector Miss Golding reports:—

Registrations.—If new factories and remodelling old ones are an indication of prosperity, then 1925 has been a prosperous year for employers and employees.

One very large factory has just been completed in one of my suburban districts, at a cost of over £20,000, land included. The floor space is 300 feet by 79 feet. The machinery is not yet installed, but will soon be and operations will start some time in 1926. A very large Victorian firm are the proprietors. This place will give employment to many women and men. It will be for the making of jams, preserves and condiments.

In the same district a very fine and up-to-date picture framing factory has been erected, with all latest improvements.

Another large factory for textiles, felts, &c., appears to be most prosperous. Various other new buildings on lesser lines, but all up-to-date, have been erected. One of these in an outer district is for the manufacture of calico, the quality of which is equal to the imported article.

A very large mill is in course of erection; when completed the cost will be anything up to £90,000. The proprietors are in occupation of one nearby where they employ over 70 women and girls who work 43 hours per week, and even very young girls earn over award rates from 25s. to 60s. per week.

Almost in every district improvements, the remodelling of old factories and building of new, are to be found.

Structural Alterations.—A noticeable fact, where these alterations are being carried out, is the desire for more space in the centre of the work room and between machinery; also to get the machines as near the windows as possible. Many alterations have been made in these.

Sanitary Conditions.—Although there is still much to be desired, in many factories a small space has been set apart for a rest room, in many cases too near the lavatories; but through want of space, this could not be altered. As the Act now stands, we have no power to enforce rest rooms.

In one factory I gave instructions to instal four extra W.C's and four wash-basins. When these instructions had been carried out I found six W.C's had been installed. The partitions between each were only 4 feet high, and no doors were provided. Needless to say these defects were at once ordered to be remedied, and the result was most satisfactory. On the whole, conditions *re* sanitary matters are much improved, but constant supervision is required to keep them up to the standard.

In various shops in my country districts I found both sexes using the same sanitary conveniences, and no wash-basins were provided. In every instance where I left instructions for providing separate lavatories for women employees, the work was carried out.

Overtime.—During 1925 I found no falling off in overtime worked in my district. Many applications were made for an extension of overtime in excess of thirty times. On investigating these requests I only found two employees who objected to working the extension required. Most of the applications came from printing firms. In one instance it was on account of large contracts which the firm had for the first time, and others through rush of work, showing conditions in this class of trade were good for the employees, with constant work for them. One firm asked permission to work a certain number of girls eight hours overtime on a Sunday, and stated that the girls were anxious to do so for the sake of extra money earned. On visiting I found this was not so, and needless to state the application was refused.

Several applications came from millinery factories and from an umbrella factory. The cause here was the change of fashion in umbrellas and the difficulty of obtaining girls who understood the trade. In this factory the weekly hours were 43 (they could have worked 48). All hours outside 43 were paid as overtime; every employee expressed willingness to work this extra overtime.

Many other employers committed breaches of section 43. In one case it was a second offence within two years. Action was taken and fines of 60s. and 40s. with costs in each case inflicted. Another firm was proceeded against and fines of 40s., 20s. and costs resulted.

Cases were taken against a biscuit manufacturer for similar breaches, also a large millinery factory, and various others. Fines of 10s. and 20s. with costs were imposed.

In my opinion magistrates view these breaches far too leniently.

Much overtime was worked in other factories and laundries, all within the law, excepting in the case of one laundry. Action was taken with above results.

Certificates of Fitness.—The same strict supervision has to be maintained in regard to section 45. I have warned occupiers on one visit, and found same breach on next visit. Some employers are most careless. One case that the Department took action in was a clothing factory. I had warned the occupier on a previous visit; on the next he informed me he had no employees under 16 years. On going through the factory I found one boy aged 15 years, a girl 14½, and a second boy aged 13 years and 8 months, all without certificates, and in the last case without the Minister's consent. Action was taken, and a small fine of 10s. with costs was imposed. In many factories I found boys and girls without certificates; not so many applications under section 40 were made this year in my district. Some in extreme cases of poverty were granted. These were cases where the father was living, and the mother could not get relief from the Child Welfare Department because she was not a deserted wife. Others were refused, as when investigated it was found that ample means were coming into the home from various sources. Another case where the mother was a widow was sent on to the Child Welfare Department. That Department had exempted the child from further attendance at school, and arrangements were made for that mother to get assistance.

A breach of section 46 came under my supervision. I found a boy aged 14 years and 7 months employed in a bakehouse (in one of my outer districts). This poor boy walked 1¼ miles to work and the same distance back, Monday to Thursday. He began at 10 p.m. to 6 and 7 a.m. next day; Friday, 8 p.m. to 7 a.m. Saturday. The Department took action in the matter and a fine was imposed. His mother was a widow and as he was 7 months over the age for State aid, she was compelled to send him to work.

General.—Conditions are much improved in wages and hours in many lines of employment. In many of the dressmaking and millinery factories the hours worked are 42¾, 43 and 44. At the present time I only know one work-room in my district where 46¼ hours are worked; girls under 16 years start at 13s. 6d.; 16 years begin with 16s. 6d. When these wages are compared with years past, for first half-year and as long as the girl would work for it 4s. per week, it will be seen how conditions have improved.

Section 26 of the Act provided for seating accommodation for female employees, but our powers are limited to a great extent. However I have been successful in getting employers to provide backs to stools, or replace them with chairs, which is most beneficial to the worker.

During the past year in particular I find that the week's work is carried out in most factories in five days, and no Saturday work. This is a great boon to workers, particularly women, whose labours are not confined to the factory only, but have many home duties to perform. Thus they have a good break. Even if they have home duties they now have time to perform them.

Conditions *re* lime washing and keeping factories clean have improved, as many employers now employ cleaners, and they do not expect young girls and boys to do this work. If it was compulsory to employ cleaners in all factories conditions *re* these matters would be much improved.

Ventilation in woollen mills has always been a vexed question in the past. A mill in one of my suburban districts has at last solved this problem by quite a new system here. In this scheme seven fans were installed at a cost of £50 each; 1,700 yards of hessian were also used. There is a constant play of water on it. This system would take too much space to describe. It has been a great success, and cost the company £2,000 to carry into effect. If other woollen mills followed this example their output would be greater, and conditions generally improved.

Senior Inspector Miss Harriott, B.A., reports:—

Registrations.—A number of small workrooms coming under the Act by the employment of four persons were registered during the year. The few larger factories registered include a hosiery mill, a drug factory, a steam laundry, and a millinery workroom. Several old premises were re-registered after having been brought up to the standard required by the Act.

Structural Alterations.—Structural alterations of a minor character were found to be necessary in many instances. In several cases questions of heat and ventilation were dealt with. In one factory four additional windows were put in and the improvement in the atmosphere of the workroom is much appreciated by the workers.

The women employed in a large factory were found to be suffering very much from excessive heat during the summer months owing to the radiation of the sun on an unlined iron roof with glass skylights immediately over their heads. Some found it necessary to work in hats to protect their heads from the heat. The women's work bench was moved to a cooler part of the factory.

Ventilators, apart from the ordinary windows, have been insisted on in a number of premises. Many buildings are now being erected in the city without any provision for permanent ventilation. It is only when they are occupied as factories that the trouble and expense of providing the ventilation required by the Act have to be faced.

Sanitation.—In premises occupied as a printing factory where women have only been recently employed I found very dirty conditions prevailing and evidences that the place was infested with rats. The factory was thoroughly cleaned and the City Council took steps to rid the premises of rats.

The usual number of instructions in regard to lime-washing and general cleanliness were found necessary.

Overtime.—Three printing firms, a hosiery factory and a firm manufacturing traced linen goods were granted extensions of overtime, but with these exceptions I found that the amount of overtime worked by women during the year was not great. The provisions of the Act in regard to the overtime worked were generally well observed.

Certificates of Fitness.—Nine applications for permission for girls under 14 years of age to work in factories were dealt with. In one instance only was the permission withheld. The economic conditions of the families in the other cases forced me reluctantly to advise the permission being given.

The following two instances show the necessity for the careful supervision of children's certificates.

A girl working in a factory gave her age to me as 14 and stated that she had left her certificate at home. On inquiry it was found that she was only 13 years of age and had been granted exemption from attendance at school on conditions that she stayed at home to help her mother. As soon as the exemption was granted she went to work in the factory. The case was referred to the Child Welfare Department.

The second case was that of a girl who applied for work in a knitting factory giving her age as 15 and stating that she had had a year's experience in the industry. The firm sent her to the Department for a certificate. It was there found that she was only just 13 years of age. On further inquiry I ascertained that after leaving the factory she had obtained work as a shop assistant and that she had been working in a factory in the country at 12 years of age. The Child Welfare Department was informed and I understand that the child was sent back to school.

General.—A hosiery mill in my district is increasing its premises by the erection of a twelve story building adjoining the present factory. Arrangements are being made to give the employees the benefit of a good dining-room and cloak rooms—improvements which are badly needed.

In factories where the noise and vibration from machinery are great it is essential that there should be quiet and comfortable rooms provided for the mid-day meal. In a condiment factory at my suggestion comfortable seats with backs were provided for use of women employees.

Employers are gradually coming to recognise that the lessening of fatigue is not only right from a humanitarian standpoint but that it tends to increase output. Some, however, still think that in providing seats without backs made without reference to height of bench or worker they are doing all that can be expected of them.

Inspector Miss Brown reports:—

Registration.—In the large area under my supervision registrations were numerous, the bulk of which, however, were re-registrations of previously occupied premises, and in the latter advantage was taken of the opportunity to effect necessary alterations and additions to bring them up to present standards. Some new buildings, constructed for the industries carried on, were added to the register, notably a suburban printing works, replete with all requirements, and fire proof, the dining and dressing rooms provided being very comfortably furnished, and excellent sanitary accommodation. Another occupied as a lace-making factory is well up to standard. In one, a boot factory just completed, I found serious fault with the position of W.C. accommodation provided for both sexes, owing to approach to same being in same area. Alterations had to be effected and more satisfactory results would have obtained had the Department been consulted before completion. Two printing factories in city area are of modern fire-proof construction, well-equipped for comfortable working conditions and in compliance with the Act. Occupiers are more inclined to build for themselves in recent years rather than try to accommodate unsuitable buildings to their industry requirements.

Structural Alterations.—In a few instances I had to serve orders for the provision of additional wash basin and w.c. accommodation where staffs had increased, a matter that is frequently overlooked by the careless occupier. In one factory I found the platforms of the fire escape had been completed at exit point on each floor without any enclosing protection except handrails. Had a fire occurred very serious consequences may have resulted, if during working hours. The matter was remedied, on my instruction, by enclosing all platforms with heavy mesh wire from handrail to floor. In three large reconstructed factories, the male inspector and I had the satisfaction of advising during alterations and rebuilding operations, thus securing modern conditions and additional comfort for employees concerned. Although gradually disappearing, some of the older types of buildings, used as factories, are increasingly difficult to keep nearly up to standard.

Sanitation.—Although fairly improved conditions have been maintained regarding regular cleansing, some occupiers are somewhat lax in that respect, and need constant supervision; others are careless about the necessary annual limewashing prescribed, or else only have walls done instead of whole interiors. However, remedial orders given are usually promptly complied with. Ventilation has been improved in older types of buildings and in new buildings constructed, special attention is directed to fulfilment of requirements of the Act. Small suburban laundries housed in premises not built for the purpose, present problems that need close attention. Proceedings were taken against two occupiers under Section 20 for dirty premises; one, in a clothing factory where the whole place was in a very dirty and neglected condition. This occupier had been previously convicted for same offence and was fined £5 and costs on this occasion. In the other case, at a suburban boot factory, very dirty conditions were evidenced and a similar fine was inflicted.

Overtime.—The working of overtime generally has been somewhat intermittent during the year, and was mostly worked within prescribed limits and conditions, but in a suburban laundry I found that excessive overtime had been worked by several female employees. Similar conditions applied in a large pastrycook's factory, a printing works, and a boot factory, and they were all proceeded against and fairly substantial penalties were imposed. In one of the above cases proceedings were also taken for the non-payment of tea-money. In a clothing factory the occupier was prosecuted for requiring young girls to take garments to their homes for "finishing;" the conditions of overtime so worked were not in compliance with those prescribed in sections 43 and 46 of the Act. Proceedings were taken in two cases, and penalties imposed.

I dealt with ten applications for extensions of overtime, some of which were occasioned by the dislocation of trade during the shipping strike. In all cases investigated an adequate reason for same was shown, and as extra labour was not available, they were granted by the Minister.

Certificates of Fitness.—During the year I found several breaches under this section, although the majority of employers now require certificates to be applied for before employees commence. In some breaches detected warning letters were considered sufficient, but in a suburban leather goods factory, a laundry, two clothing factories, a boot factory, and flour packing factory, the breaches disclosed were serious, and each occupier was proceeded against, fair penalties being imposed in all cases. In one or two instances certificates which were issued to girls who were over 14 years of age, were specially marked by the certifying doctor, showing that applicant was suffering from "heart affection," or was otherwise delicate and fitted for "light work" only. I have given special supervision to these cases, after satisfying myself that the duties performed by them were suitable and not detrimental to their health, and that consideration was extended to them.

I investigated about twenty-two applications for permits under section 40 for Minister's permission for girls under 14 years to work in a factory, of which two were withdrawn. Some of the others were very nearly the requisite age, and the family circumstances of the other were so straitened, either owing to the illness or unemployment of the father, or similar causes, and on reports being submitted to the Minister, the required permission was given.

Laundries.—In a few instances alterations and additions were made to laundry premises in my areas, included in which I had improvements effected to ventilation, general cleanliness and periodic limewashing was fairly well maintained, and any orders necessary were promptly complied with. I usually stress the neeessity for regular obesrvance of hygienic conditions in this class of factory, owing to the nature of the work carried on, thus affording some measure of protection to the health of employees concerned.

Country Area.—I made a general survey of factories at Katoomba and Leura and found fairly good conditions maintained. In a few instances orders *re* cleaning and limewashing were necessary, and were complied with readily. All are comparatively of the smaller class of factory.

General.—In many industries slack periods were numerous during the year, noticeably in the shirt trade, the boot trade in the earlier months—but improvement was shown later—and in dressmaking, white work and some of the knitted goods. Increased activity was shown in corset and brassiere making. In one factory the staff was about doubled and later additional floor space had to be acquired on adjoining premises to enable more employees to be engaged. All trades showed improvement as the year advanced. In the latter part I was frequently asked if I knew of any machinists out of employment. As the application of the whiteworker's award has been extended to cover more classes of work, additional supervision will be necessary.

Welfare Work.—More factories are now equipped with first-aid emergency chests, and in many of the larger ones, a capable matron is in charge, who treats minor ailments and accidents, and generally attends to the health and well-being of the employees, at least in an advisory capacity. In many factories comforts, that in former years were regarded as luxuries, are now proved as ordinary necessities.

Dining room accommodation is more generally provided, often with individual lockers included, but I would still like to see more co-operation by employees concerned in assisting to maintain good order in them.

On the whole I consider that factory life generally is improving considerably from year to year, and a great measure of that improvement is due to the supervision given by responsible officers of the Department.

Inspector Miss Scobie, O.B.E., reports :—

Registrations.—With the exception of two new and substantial buildings in the city and two of moderate dimensions in an outlying suburb, all other registrations effected by me during the year 1925 were due solely to change of occupier.

One six-storey building, however, though built during 1924, had not previously been occupied for factory purposes. Towards the end of the year six separate occupiers entered into occupation. In view of the dangerous and insufficiently guarded stairways I approached the owners' representative, pointing out the possible dangers, and suggested that the stairways should be wire-netted as a precaution against accident. After discussion, my suggestions were agreed to, and the work subsequently carried out. This makes the fifth six-storey building—built within recent years—in which I found it necessary to insist upon adequate guarding of dangerous stairways. If due consideration were given to these matters whilst building operations were in progress it would be found to be much more satisfactory to the owner, the contractor, and the occupier.

Structural Conditions.—In this connection, in the area under my supervision, much valuable work has been carried out during the year.

As a result of much persistent effort on my part, at the same time working in complete harmony with the company, I am able to report that a large fruit-preserving and jam manufacturing company reconditioned during the slack season the entire concrete floor area in the main preserving room. This was an achievement much to be desired.

A knitting factory in a suburban area made extensive additions not only to the building occupied by them, but to the machinery used in the manufacture of hosiery. Two laundries, also in the suburbs, one employing on an average about sixty women and the other about twenty, underwent complete reconstruction. In the smaller of the two structural alterations were completed at the close of the year. In both instances, however, working conditions were decidedly improved.

The building of an additional storey to premises in which dry-cell batteries are manufactured added considerably to the comfort of the employees, and in view of the nature of the process, to the possibility of keeping the premises up to something approaching the required standard of cleanliness.

The remodelling and extension of premises to meet the demands of an expanding industry, the manufacture of toilet brushes, was another building feature worthy of note.

Other structural alterations of a more or less minor character were carried out in quite a number of factory premises.

Hygiene.—In conjunction with the male inspector for the district, I reported adversely, both from the point of view of the situation and the structural conditions generally, on certain premises, in which the weaving of blankets and other woollen goods is carried on, and which has been occupied as a factory for a great number of years. However, owing to certain baffling circumstances the matter was at the end of the year still in a state of indecision. The dust generated in a bag and sack repairing factory situated in an outlying suburb, and employing on an average four women, has occasioned me much anxious thought, and is still claiming my attention.

The inadequacy of the sanitary arrangements provided in a commercial house in the city, employing forty female clerks, came under my notice. I made an investigation, and after several consultations with the managing director succeeded in having the matter satisfactorily adjusted.

As a result of a telephone complaint I visited a retail shop in the city and found that the sanitary conveniences provided for a large staff of female shop assistants were grossly inadequate. I left written instructions upon the manager to provide accommodation forthwith, in conformity with Regulation 15 of the Factories and Shops Act. Temporary provision was agreed upon pending extensive building reconstruction. In a factory occupied by a pastrycook, employing seven women for several years, but originally registered as not employing women, I found one sanitary convenience only provided for both sexes. The occupier appeared to be labouring under a genuine misapprehension in his interpretation of the Act governing this matter. I, therefore, gave written instructions for his future guidance.

In company with the male inspector for the district, I found it necessary in a certain area to visit the local authority and bring under his notice insanitary conditions surrounding several factories situated in the main thoroughfare of his borough. The joint complaint received immediate attention.

Speaking generally, I found throughout the year that the standard of cleanliness and sanitation was fairly creditably maintained.

Overtime.—In the course of the year I made seven investigations in connection with applications for extension of overtime. Six were in respect to printing establishments, and one necessitated by the breakdown of an automatic packing machine in a grocery packing factory. In each case the application was granted. Several firms were found to have exceeded or overlooked the regulations governing overtime. After investigation and report these firms were warned that action would be taken on the occurrence of similar breaches.

Certificates of Fitness.—This phase of my work has had close attention from me, and in only one instance did I find a certificate stating that the child was suffering from organic heart trouble; her duties were of a very light nature. In the course of daily inspections one finds that while some employers of juvenile labour are very strict in the matter of obtaining certificates, others are rather lax, necessitating constant supervision.

During the year I made investigation and reported upon nine applications for special permits for children under 14. In seven cases the permits were granted. In one case I found, after two visits to an outlying suburb, that the mother had given deliberately inaccurate information; this application was withdrawn. In the other case, the child appeared altogether too delicate to enter a factory, so I obtained relief for the family in another direction.

General.—In the course of the year I was called upon to investigate and report upon an application by a printing establishment for permission to work a section of their female employees on night shift. To grant such permission would have been, in my opinion, a retrograde step, apart altogether from the fact that the application was out of all harmony with the considered opinions of international tribunals. The application was refused.

Inspector Miss Stuart-Robertson reports :—

Registrations.—In the city area of my district new registrations have been fairly numerous. The erection of new buildings and remodelling of old ones has provided more up-to-date premises, which have been rapidly occupied, principally by persons carrying on various branches of the clothing trade.

In the suburban areas there has not been such a marked increase, though there have been several new factories registered. One of these was an extension of engineering operations and another an extension of large rubber works.

Structural Conditions.—In the new buildings almost perfect conditions have been aimed at and obtained. The value of natural lighting has received due attention, but continuous natural ventilation has been seriously neglected by the builders, necessitating provision being made after occupation. When attending to the registration of a new factory I found the temperature in a work room on the top floor was considerably higher than is allowed by regulation. This was due to absence of a ceiling under the galvanised iron roof. I served an order to provide this necessary addition which was promptly complied with.

Sanitation.—Defective ventilation is my chief cause of complaint, even in some of the new buildings. This appears to be not even a secondary consideration.

Attending to a new registration I found just one ordinary window in each w.c. which could not even be opened when the conveniences were being used, as the interior would be in full view from private dwellings near by. I served an order to have louvered openings made to replace the windows. This matter was immediately attended to satisfactorily. I have found that constant supervision in sanitary matters is necessary. On almost every visit evidence of carelessness and indifference is noticeable, which if not checked would develop into serious breaches of the Act.

Overtime.—A large amount of overtime has been worked during the year, and in some cases the statutory limit has been exceeded. I have reported such cases for necessary action.

Ten applications for permission to work additional overtime have been inquired into by me, and as my report disclosed that the overtime was required for the exigencies of trade, and the females were quite willing to work the overtime required, the applications were granted.

Certificates of Fitness.—The majority of occupiers have observed the law in this regard, but in some cases I have found girls under 16 years for whom no certificate of fitness had been procured owing to the practice of keeping girls employed for a few weeks to see if they are suitable. I have served numerous orders on occupiers to procure this very necessary certificate, and have reported when I considered some action was necessary to convince them of their obligations.

General.—During the year 1925 I made the necessary periodical inspections of my districts. I also made two inspectorial tours of Newcastle, and was accompanied by a newly appointed Inspector. Some very valuable work has been done by the medical officers of industrial hygiene at the large woollen mills in my district.

Mr. Inspector Clark (Newcastle) reports :—

During the year administrative changes were made, and I was appointed to the position of Officer-in-Charge of the Newcastle Branch, which involved added duties in the superintendence of the activities of the Labour Exchange. The change further involved a re-arrangement of districts, my inspectorial duties being limited to the environs of Newcastle and suburbs, with the consequent enlargement of the areas allocated to the other officers' districts to cope with the country areas previously supervised by myself.

General.—The Newcastle District, extending as it does over an area bounded by Fassifern on the south, the Macleay River on the North Coast, Werris Creek on the north west, and Cassilis on the west, offers an immense field for industrial development. 1925 has seen a further extension of that development of industry which has characterised the district during the past ten years, during which the iron and steel industry has been brought into being, and which with the growth and development of its subsidiary industries is destined to ultimately make this centre the Birmingham of Australia. In the five-year cycle the growth is evidenced by the fact that at November, 1920, there were 936 registered factories in the area, and at September, 1925, 1,228 factories, an increase of 32 per cent.

Registrations.—There has been a progressive increase in the number of effective registrations, allowing for numerous registrations occasioned by changes of occupiership.

Structural Conditions.—Improvement has been again noticeable during the year, markedly so in the case of a new plant and accessories, erected during the year for A. Goninan & Co., Limited, engineers at Broadmeadow. Extensive additions have also been made to the Commonwealth Steel Products, Ltd., plant at Waratah. The type of building now erected for this class of work shows a big advance on the class hitherto existing.

Fencing Machinery.—Improvement of the standard of guarding dangerous machinery has been a feature of the year. Electrical power directly coupled to machines is coming into use more generally in industry, with the consequent elimination of much shafting and pulleys, a prolific source of danger when unprotected. Advice is now more frequently sought through Departmental channels than has been the case hitherto in the fencing of dangerous machinery, the co-operation being productive of more effective results.

Constant visitation is still, however, necessary for the observance of the Act, and to ensure the elimination of danger points, as many occupiers of factories still fail to realise the responsibilities imposed by the Act. To illustrate : An occupier of a factory wherein the machines are, or should be, mechanically guarded with an appliance which does not allow of the operation of the machine without the guard being at first brought into position, had one of these machines dismantled under repair. When repairs had been effected the machine was operated without the guard for some time, when a serious accident occurred, which could have been prevented had the occupier realised his moral obligation apart from the legal obligation imposed by the Act, and this resulted, though the premises were regularly visited, and repeated personal attention directed to the matter. The occupier was proceeded against as a result of his neglect, and the Court imposed the maximum penalty under the Act, and made an order for the immediate safe-guarding of the dangerous machines.

Accidents.—No fatal nor serious loss of limb by accident has occurred during the year in my district, the casualties being confined to minor injuries, such as burns, lacerations to fingers and hands, mainly arising from the use of wood-working machines. These, however, do not call for any special notice.

Fire Escapes.—No new fire escapes have been erected during the year. Newcastle has few lofty buildings. What there are are used for office purposes, over which the Act has no jurisdiction. There are few factories in the district carried on above the first floor.

Overtime.—Very little overtime has been worked by females and juniors during the year, except by the clothing trades at the seasonal rush at the end of the year.

Certificates of Fitness.—Closer attention is now given to the section requiring certificates of fitness for young persons in factories by occupiers. Instances of young persons employed without the necessary permit are few in comparison with previous years.

Boiler Regulations.—The observance of this provision has been well maintained during the year.

Mr. Inspector Armstrong (Newcastle) reports:—

I have to report that the district under my control was again extended this year by the addition of that area bounded by Muswellbrook and Werris Creek. A small portion of my district, Telegraph Point to Eungai, was taken from me and added to the North Coast district. The metropolitan portion of the Newcastle district was also revised and the suburban areas differently allocated.

Registrations.—A number of registrations were dealt with during the year, but these chiefly comprised changes of ownership in smaller industries: bakehouses, tailors, and butchers. A considerable number of motor engineers were registered as factory premises, especially in the country portion of my area.

Sanitation.—Generally speaking sanitary conditions are fair, and it is pleasing to note the increase of septic tanks where sewerage is not available.

Fencing and Guarding of Machinery.—Occupiers of long standing in country districts rarely give much trouble respecting fencing and guarding, and new occupiers appear to be quite prepared to adopt any reasonable suggestions made for the protection of employees. I have found that the chief difficulty rests with employees, who persist in removing fences and safety appliances for no apparent reason whilst working and failing to replace such guards on completion of their work. It was necessary, therefore, to instruct many occupiers to maintain all fences and guards.

Accidents.—A number of minor accidents were investigated during the current year, but I am pleased to report that no fatal accidents occurred; in fact no very serious accidents were brought under my notice at all.

Fire Escapes.—There were no new buildings erected during 1925 which necessitated erection of fire escapes.

Bakehouses.—Most bakehouses visited during the year were kept in a reasonably clean condition, although many instructions were served to limewash.

Certificates of Fitness.—In the Newcastle portion of my district the provisions of section 45 were fairly faithfully observed, but country employers were very lax, especially where the occupation is seasonal. This was especially noted in the vineyards and rabbit refrigerating industries.

Overtime.—Very few notices of overtime were received, these being principally in the clothing and millinery industries prior to holiday periods, and doubtless were quite *bona fide.*

Mr. Inspector Darbon (Newcastle) reports:—

During the first half of the year under review I had the oversight of the Southern district of the Newcastle area embracing that portion of the south from Cardiff to Brooklyn on the Hawkesbury.

During the remaining half-year, I was in charge of a district embracing the territory north-west of Newcastle to Muswellbrook and the North Coast as far as Dungog.

Registrations.—A number of new registrations were effected, but for the most part these were due to changes of occupancy. A number of cancellations were put through, which had the effect of maintaining the number of factories at normal.

Structural Alterations.—On no occasion was it necessary to adopt drastic measures to enforce the provisions of the Act in this direction. In the country districts many of the factory premises are old and built of wood and iron, and at times it became necessary to direct an occupier's attention to the conditions of roofing and other small defects, which were readily remedied and brought into line with the required standard.

Sanitation and Ventilation.—This matter received full consideration, and in a number of cases it was necessary to direct an occupier's attention to the necessity of limewashing and minor repairs.

The pan system being in general use in the country districts, the same standard as that maintained where water closets are installed is difficult to obtain, but as this matter receives the attention of the local Health and Council Inspectors in addition to our own supervision serious cases of neglect are seldom met with.

In a number of cases improved ventilation was obtained by fitting glass louvres to the upper half of windows where the design and construction of the outer walls were such as to prevent the fitting of air-bricks.

In one large works in my district, change rooms, complete with lockers and showers, have been installed, and have been readily availed of by the employees, so much so that the management has decided to erect change rooms at various centres on the plant.

Fencing and Guarding of Machinery.—This very important phase of the work has received full attention, and much progress has been made in the design and adoption of improved types of guards. The matter of maintenance is as formidable as ever, but due to the results obtained at a big steel plant in my district, I am forced to the conclusion that the solution to this problem lies in educating the operatives to a live sense of their responsibilities and a healthy regard for safety-first principles, for this company has by means of lively safety-first propaganda engendered a spirit of goodwill and co-operation on the part of the employees, which has had its reflex in an astonishing reduction of the number and severity of accidents.

Accidents.—A number of fatal accidents were investigated and coronial inquiries attended during the year, only one of which came under section 38 of the Act.

This fatality was caused by a guard being left off a set of bevel wheels of big dimensions, the unfortunate operative believing the guard to be in position stepped into the revolving teeth and met a frightful death. Proceedings were instituted against the Company for failing to maintain the guard, and at the hearing of the case a millwright was produced whom the company accused as being responsible for the guard being out of place. It was able to establish a case against this employee under section 61, and he was convicted and fined.

A number of minor accidents were investigated, and the conclusion invariably arrived at in each case was a decided want of care upon the part of the operatives.

Eye cases were frequent during the year, and in the majority of cases the injured man had to admit that protection goggles could have been readily obtained at the workshop store for use when grinding at abrasive wheels and chipping, &c.

Fire Escapes.—In one instance only was it necessary to attend to the installing of an alternative means of escape in case of fire, an outside steel stairway of approved design being erected.

Bakehouses.—In all cases where foodstuffs are prepared the provisions of the Act have been rigorously enforced. The periodical visits of health and pure food inspectors to this class of factory, in addition to our own inspection, tend to forcibly remind the occupier of the necessity for cleanliness.

Certificates of Fitness.—From the small number of irregularities detected in this direction it would seem that occupiers generally are alive to their obligations under the Act with respect to the employment of young persons.

General.—No new industries were commenced in my district during the year. Sawmilling has suffered a slump due to the comparatively low prices of imported softwoods. A number of mills having valuable plants installed have gone out of business during the year, and show no indication of re-opening. The iron and steel industries have maintained a steady output, and except for minor industrial troubles have worked full time.

Mr. Inspector Hastie (Lismore) reports :—

I was transferred to the Northern Rivers district at the beginning of the year, but did not commence duties in the district till March. Up till then I was engaged in the metropolitan areas assisting inspectors with their work.

The district is worked from head office, with tours of 18 to 21 days' duration; between tours I have been assisting in the metropolitan areas.

Registrations.—During the year registrations have been fairly numerous, being mostly confined to change of occupancy, although several new sawmills have been erected and others are in course of erection on the belt of timber country between Glenreagh and Dorrigo. From information given this is going to be a fairly extensive industry in the locality, as there are over 25 years' timber cutting in sight.

In one instance an occupier was prosecuted for failing to observe section 7.

Sanitation.—This is a phase of the work that needs careful consideration as the system in vogue throughout the country, the pan system, is not conducive to the well-being and general health of the community. Only in a couple of the large towns, Lismore and Grafton, is a sewerage system installed; in Casino a sewerage scheme will soon be put into operation. As a rule occupiers, knowing of the consequences, do their best to keep lavatories in a clean state. On visiting a factory at Lismore, where members of both sexes are engaged, it was found that one lavatory was provided. On the matter being pointed out, it was immediately rectified.

Fencing of Machinery.—This feature of an inspector's work is one that needs constant supervision, not that there is altogether neglect on the part of the occupier to fence, but rather from the fact of allowing the fencing to get out of repair, and also that fences are poorly constructed, being in a condition that one could readily push them down. I am pleased to state that I am gradually replacing the wooden posts and rails with iron piping and wire mesh netting or plate between the rails. Occupiers readily acquiesce in any instructions issued *re* the fencing and guarding of machinery.

On one occasion an occupier was prosecuted under section 33 of the Act.

Accidents.—Very few accidents were dealt with during the year, and they were of a minor nature, although one was very serious. An employee at a saw mill, situated in the bush 25 miles from the nearest town, met with an accident, which proved fatal owing to the injuries received. He was employed as a middleman, and was standing 10 feet away from the machine. The machine was a rip saw, 2 feet in diameter, and driven from a counter shaft by a belt 7 inches wide. The belt was fastened by three metal clips with $\frac{1}{4}$-inch bolts. The belt broke and the clips struck the employee in the stomach, causing injuries which proved fatal. The belt was unprotected and no fencing was provided. The occupier was proceeded against for failing to fence the machinery, and also for failing to register his factory, the result being that penalties were inflicted.

Fire Escapes.—As all the factories, with the exception of one, are situated on the ground and first floors, there is no necessity for alternate means of escape. The only escape in use is in Lismore, and is quite in conformity with the requirements of the Act.

Certificates of Fitness.—In most instanees this section of the Act is well observed, there being only a few occasions where it has been necessary to issue instruetions to obtain the necessary certificate.

Overtime.—No applications were received from factory occupiers for permission to work overtime.

Bakehouses.—These were found to be generally well up to the requirements of the Act, beyond the issuing of instructions to repair the floors on a few occasions. Mostly the floors are of concrete, and show a fair amount of wear at the oven doors. On one occasion a bakehouse was found not to be up to requirements, but the occupier removed to new premises the day following my visit. This obviated instructions to comply with the requirements, more especially as the occupier held a lease of the old premises, preventing anyone else occupying them.

Boilers.—These regulations have also been observed, there being no necessity to report for failing to have boiler examined, although instructions have been issued to occupiers to exhibit certificates and provide a suitable cover for them.

Early in May, I investigated an explosion of a boiler that had occurred at a sawmill at Nambucca Heads. Fortunately no one was injured, although there were people in the vicinity at the time. This was a remarkable fact, as roofs of residences in the near vicinity were riddled with holes from falling bricks and debris. The boiler was 46 years of age, and had been periodically examined; the age and the nature of the material forming the boiler being brittle, owing to the metal being crystallized, were the cause of the explosion.

General.—All the main towns were visited in the district. It is a very satisfactory state to find that occupiers generally are only too eager, and welcome a suggestion from an inspector for the betterment of conditions, both hygienic and safeguarding of employees.

Mr. Senior Inspector Burkitt (Tamworth) reports:—

General.—During the year 74 certificates of registration have been issued in my district, 32 being for new factories, and the remainder owing to change of occupiers, &c. The greater number of factories in the main towns have been inspected twice, and most of those in the outlying districts once, during the year. A few of the latter, however, were not visited, viz., nine, all small ones, in the extreme north-west, on account of distance and cost of transport, and six forest sawmills in the north, which were totally inaccessible when I was in that portion of the district owing to swollen rivers and creeks, due to heavy rains in January, and a second visit to outlying districts was found to be impracticable. The missing of these latter inspections particularly was very unfortunate, as both occupiers and workmen are apt to become careless in the matter of machinery guards when the inspector's visits are few and far between.

Machinery Guards and Accidents.—No serious case of unguarded machinery was discovered during the year except in places which had not hitherto been inspected, but in some of these, mostly forest sawmills, no attempt whatever had been made in this direction. One fatal accident, unfortunately, happened at an unregistered chaff-cutting machine to a young man, who attempted to save a small belt from destruction by grasping it before the engine was stopped. The occupier of an ice factory, also unregistered, had his leg broken by inadvertently treading on a small vertical belt which had slipped off the lower pulley. Three minor accidents were also reported, viz., one at a leather rolling machine and two at circular saws.

Boiler Regulations.—In several instances I have found it necessary to report occupiers of factories for having failed to have their boilers inspected during the previous twelve months. This is a very serious difficulty with some, as there are only two authorized inspectors residing in the district, and they have very little time at their disposal to travel long distances just when required, and the cost of engaging one from Sydney is very high.

Sanitation, Ventilation, &c.—Limewashing, painting and cleaning have been regularly attended to, and in no case have I found a serious breach of this portion of the Act. Quite a number of small places, such as bakehouses, &c., have been rebuilt. One comparatively large printing works, which was formerly housed in two separate factories, both much congested, has now found a new home in a thoroughly up-to-date building of reinforced concrete scientifically ventilated, and provided with septic tanks, &c.; and another, a large flour mill, has also been removed to a new building of a thoroughly satisfactory design.

I am glad to report that the town of Tamworth, the largest in this district, is at last being sewered

Mr. Inspector Baker (Orange) reports:—

Registrations.—There were a number of new registrations during the year in addition to those due merely to changes in occupancy. Electric Light and Power Stations having been installed (on proper commercial lines) in four of the larger towns in the district. Many factories already registered installed electric motors, and a number of small places (work-rooms) where mechanical power had not previously been employed also introduced this class of power.

I expect a further increase of factory registrations in the towns referred to when the reliability of the stations to maintain an efficient service has been more fully proved and when the charges for power have been reduced to a lower figure to that now ruling.

It is of interest, however, to know that in several instances it has been found that the cost of electric power, although considered to be too high, has been found to be 50 per cent. less than the cost of town-gas power when employed to drive the same machinery by gas engine. A large reinforced concrete building was erected during the year at Orange for Amalgamated Textiles Aust. Ltd., as woollen mills. The company will instal the latest and best machinery employed in the manufacture of the highest grade woollens. The mill when equipped will contain looms (60), spinning frames (20), mules (2 pairs), carding machine (1), devils (2), twisters (10), warping machines (3), winders (5), finishing machine (1), scour bowls (2), crabbing machines (2), nap raiser (1), cutting machine (1), rotary press (1), tentering machine (1), also a large steam boiler for steaming and heating purposes. Arrangements have been made with the Orange Municipal Council for the supply of electric power to the extent of 600 h.p. It is estimated that within a few months 250 persons will be employed by this company, at the Orange mill.

An important development in the brick-making industry in the West occurred at Parkes. A firm of experienced brick makers, after making tests, installed dry press brick-making machinery. The bricks made were very satisfactory. Although this process of brick-making had been previously tried in the district, the material used was clay and the results were not satisfactory. The new company use a decomposed rock as the chief ingredient, and it is found that this material grinds to a fine powder in the pan, and, when pressed and burnt produces a brick of the first quality. On account of the very acute brick shortage that has existed in the West for a number of years, the development is an important one, as the rock used by the Parkes company occurs over a very wide area in the West, and rumours of other companies starting in this industry are already being heard.

The erection of substantial concrete buildings for abattoirs was commenced during the year on a site about three miles from Orange. The buildings are not yet ready for occupation.

Another new industry for the district was started during the year, viz., the manufacture of fibro-plaster sheets at an Orange factory.

Sanitation.—Sanitary conditions at factories are being improved but without a proper system of sewerage, particularly in the large towns, conditions can never be quite satisfactory, as the pan system in use in all the towns of the district, with the exception of Orange, which is sewered, is not satisfactory, particularly at premises where large numbers of persons have to be provided for, such as large factories, shops, hotels, and boarding houses. It is pleasing, however, to note that at least in some instances septic tank systems are being installed at hotels in the district. In all cases where plans of proposed new factory buildings were submitted for my inspection I insisted on the sanitary provisions of the Act and Regulations being fully observed.

Bakehouses.—Bakehouses in the district received attention, and where any slackness was evident in the keeping of the premises clean orders were given to bring the conditions to the required standard of cleanliness. In several instances I had occasion to instruct occupiers to remove tins and other articles from the floor, under the troughs and benches, and to remove flour dust that had accumulated under such places. No case of serious neglect on the part of the occupier to comply with the Act came under my notice.

Fencing of Machinery.—This important matter received my attention, and I am able to report that on the whole fencing and guards were satisfactorily maintained.

Boiler Certificates.—Factory boiler certificates and also certificates for other pressure vessels were inspected. If any such plant was being employed in a factory without a certificate I instructed the occupier to at once have same inspected and to exhibit the certificate.

Accidents.—I am pleased to again report that few accidents, under section, occurred during the year.

A joiner engaged at a Universal mid saw lost two joints of three fingers of the left hand when his hand came in contact with the revolving cutters while engaged cutting a rabbet in a piece of timber. The machine was provided with a full set of guards but in setting up the cutters these had been removed by the employee and not replaced.

A young journeyman employed at a motor garage workshop was badly burnt about the hands and arms when benzine in a tin used for washing grease and oil from parts of a motor ignited. The employee, fearing that the flames would set fire to the building, carried the blazing tin to the yard. It is pleasing to report that he fully recovered from his injuries.

Fire Escapes.—There were no registrations of buildings with work rooms above the first floor during the year.

Certificates of Fitness.—A number of occupiers were warned for employing juniors under 16 years of age in factories without certificates of fitness. In no such instance, however, did I find that the employee was doing any dangerous work. In most cases the juniors were employed merely as messengers.

Overtime Restrictions.—No breaches of this section came under my notice during the year.

General.—The coachbuilding (horse vehicle) industry in this district is now practically extinct, the motor car and motor lorry having replaced the horse vehicle almost completely. In a few instances the coachbuilder has attempted the motor body work, but there appears to be little chance for a small concern doing very much of this class of work in the country.

Mr. Inspector Nolan reports :—

The end of December, 1925, closed my seventh year as inspector in charge of the near West district, embracing the area from Doonside to Bathurst and from Wallerawang to Coonabarabran, and the lengthy period enabled me to become well acquainted with all phases relating to the administration of the Factories and Shops Act in the area mentioned.

Registrations.—A number of applications for registration of premises were dealt with, but the bulk of them were connected with changes of ownership. A notable addition was the installation of a new cement-making factory in the Kandos district. The new factory will make the third of its kind on the Wallerawang–Mudgee line, and that district bids fair to become the home of cement making in New South Wales as it contains unlimited deposits of cement-making materials.

Structural Alterations.—Instructions were issued in a number of cases to effect minor structural alterations, and no necessity arose for the serving of a Minister's Order.

Sanitation.—Matters under this heading were found to be fairly satisfactory. Supervision was exercised with respect to the internal sections and surroundings of the factories, and numerous instructions were issued to limewash walls and keep premises in cleanly order.

Fencing and Guarding of Machinery.—A large amount of work was dealt with under this section, and care was exercised to ensure that all danger points were securely fenced and guarded and the fences and guards properly maintained. Matters under this part (section 33) present wide scope for co-operation between the inspector and the many occupiers and many excellent results have been obtained by such co-operation.

The existence of the departmental museum displaying models of approved guards coupled with the distribution of printed matter illustrating approved types of guards have helped considerably in securing and maintaining a good standard where fencing and guarding of machinery is concerned. Work under this section engages the bulk of an inspector's time and, although many cards directing compliance with the Act were issued, no opposition worth recording was met with.

Accidents.—Three fatal accidents occurred during the year.

At a steel works an employee was engaged with others changing rolls. The work necessitated the dismantling of the coupled shafting at the side of the rolls and also the temporary removal of the fencing which protected the shafting. After new rolls had been adjusted and before the fencing was replaced the deceased, in assisting to place a water-box on top of the rolls, placed one foot on the floor and the other

on the coupled shafting. Whilst standing in the position stated the machine was put into motion and the foot which was resting on the coupled shafting was drawn into the machinery. The injuries inflicted caused the death of the man a few hours later. This accident was apparently caused through the deceased not hearing or misunderstanding the customary signal which had been used during the life of the plant. To prevent a repetition of the accident a special starting whistle was fixed near the rolls.

The second fatal accident occurred at a cement works. The employee concerned was endeavouring to put a belt on a moving pulley by using a short length of rope when the rope became entangled in the pulley of an adjoining machine causing the accident which terminated fatally.

The third fatal accident occurred at a wine-bottling factory. The deceased was engaged lighting a spirit blow-lamp. He tapped a 4-gallon tin of methylated spirits and left it on the floor a short distance from the bench where he was attending to the lamp. He was pumping the lamp when the flame projected towards the tin and ignited the spirits. An explosion followed and the man was so seriously injured that he died before reaching the local hospital.

An accident befel a man employed at a tannery. He was working at a machine, commonly known as a chaffcutter, cutting bark. The guard covering the revolving blades at the top of the machine had been taken off. The man fell near the machine, when his elbow struck the blades or knives inflicting serious injury to his elbow.

In addition to the above a number of accidents inflicting slight injuries were reported under section 38 of the Act.

Fire Escapes.—Periodical inspections were made with respect to means of escape in case of fire as provided in section 39 of the Act, and such means were found to be satisfactory. There are not many tall buildings in the country used for factory purposes, consequently there was not much work to do under this section.

Bakehouses.—A number of instructions were issued to limewash bakehouses, and steps were taken to ensure that the surroundings were kept in proper order.

Certificates of Fitness.—In factories where children were employed examinations were made for the purpose of ascertaining whether all children under the age of 16 years held the necessary certificates. Very few were found without certificates, and where they were action was taken directing compliance with the section of the Act forthwith.

Boiler Inspection.—In all factories visited where vessels or boilers containing steam, air, &c., under pressure were used, the departmental certificates were examined to see if such boilers, &c., were inspected by accredited inspectors within the required periods. All breaches of this regulation were reported.

General.—Notable advancement has been made in a number of factories in connection with the slogan of "Safety First." The general manager of a large cement works displays a keen interest in such matters and encourages the whole of the works staff to do likewise. He established a Safety First Committee, which meets once a week to deal with any matter relating to the safe working of the factory. A well-equipped ambulance station has been erected near the works, and an ambulance car has also been provided for use at the factory. The same manager also imported a film featuring Safety First principles, and this film was screened at a picture theatre near the works for the benefit of the company's employees. The film has also been screened at other suitable places for the benefit of persons engaged in various industries.

Mr. Inspector Young reports :—

For the first nine months of this year I was in charge of Broken Hill district, and all matters in connection with the Factories and Shops Act were working satisfactorily. A considerable amount of my time was taken up with industrial matters, workmen's compensation, and gas meter testing. I commenced duties at Head Office on 28th September, my district being Waterloo, Mascot, Botany, Alexandria, Erskineville, St. Peters, and East Sydney.

Registrations.—During the three months in this area there were many new registrations and changes in firm names.

Fencing Machinery.—In every factory visited I gave instructions for fencing of dangerous machinery.

Fire Escapes were inspected and found satisfactory. One new escape was installed in a large factory at East Sydney, in accordance with my instructions.

Accidents were generally of a minor character, two being serious. A youth, 18 years of age, wearing a loose hessian apron, was caught by a revolving shaft 14 inches from the floor, resulting in loss of a leg at knee.

Another youth, 17 years of age, put his hand under a gang saw bench to remove sawdust. He came in contact with saws and had all the fingers of right hand taken off. The bench was well guarded, but the boy stated he thought the saws were not working.

The Bakehouses visited by me were satisfactory.

Certificates of Fitness.—I found at one firm a considerable number of boys under the age, 16 years, without certificates. The firm was prosecuted and fined. At other firms there were odd cases. Generally speaking this section is well observed.

Mr. Inspector Waugh (Wollongong), reports :—

Registrations.—Registrations during 1925 were mostly through change of ownership.

Sanitation.—In my district there is no sewerage system and occupiers of factories have constantly to be reminded to use disinfectants.

Fencing Machinery.—Most occupiers of factories using dangerous machinery recognise they must securely fence same. The only people still neglectful are both employers and employees in bush sawmills.

Accidents.—I am pleased to report that no fatal accident occurred in any factory in my district during 1925. A fair number of slight accidents happened, but most of these were not under section 38 of the Act.

Bakehouses.—Occupiers of bakehouses readily carry out instructions to keep their premises in a cleanly state.

Certificates of Fitness.—Employers have constantly to be reminded that they must obtain certificates of fitness for boys under 16 years of age.

Boiler Inspections.—Boilers are now inspected fairly regularly and little trouble is experienced in this matter.

General.—Factories on the South Coast during 1925 were not busy, sawmills in particular from Nowra to Eden being very slack. The outlook at Port Kembla for 1926 is more promising, as men are working on a site where it is expected a large factory will be erected.

Mr. Inspector Wallace (Goulburn), reports :—

Registrations.—A fair number of factories were registered during the year, but these were mostly re-registrations. New bakehouses, brickworks, and an electric power-house were erected.

Structural Alterations.—Several notices have been issued to effect improvements in various factories throughout the district.

Sanitation.—A great deal of improvement has been carried out in the sanitation of factories. In the greater part of the district the conditions are good. In one large factory the occupiers have agreed to install an extensive septic tank system, also bathing accommodation at an early date.

Feneing Machinery.—This section of the Act has been enforced with good results and many improvements have been carried out where old fencing was fitted.

Accidents.—I am pleased to report that no fatal accidents occurred in the district during the year. Very few accidents have occurred during the year and these were mostly of a minor nature. The most serious was in a joinery shop where an employee had four fingers cut off through poking down sawdust underneath a circular saw bench when the stick slipped precipitating his hand underneath a circular saw.

Overtime.—Overtime was mostly worked in the factories where women's and children's garments are made. Otherwise conditions in factories were normal.

Certificates of Fitness.—Only in odd cases I found it necessary to enforce this provision of the Act.

Bakehouses.—Considerable improvement has been carried out in a number of bakehouses. Three new ones have been erected on lines suggested by me.

General.—The new Goulburn Woollen Mills were operating with a large staff during the year, which has been a valuable acquisition to the district. The Burrenjuck Hydro Electric Scheme transmission lines are in course of erection, and it is expected that electricity will be supplied to the towns of Murrumburrah, Cootamundra, Young, and Junee in the early part of the year 1927.

Appendix I.

Persons employed, by Class of Factory, Classified by Industry—1925.

THE STATE.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
CLASS 1.—TREATING RAW MATERIAL, THE PRODUCT OF PASTORAL PURSUITS.												
(a) Animal Products.												
Boiling-down and tallow-refining	10	1	...	4	...	9	...	122	...	136	...	136
Glue	2	...	...	...	44	3	20	102	11	105	75	180
Tanning	71	38	...	46	1	50	3	903	5	1,037	9	1,046
Wool-scouring and fellmongering	33	6	1	16	...	38	...	606	2	666	3	669
Other animal products	10	36	...	37	...	42	...	210	...	325	...	325
Total	126	81	1	103	45	142	23	1,943	18	2,269	87	2,356
(b) Vegetable Products.												
Chaff-cutting	147	...	...	1	...	8	...	361	...	370	...	370
Total, Class 1	273	81	1	104	45	150	23	2,304	18	2,639	87	2,726
CLASS 2.—OILS AND FATS—ANIMAL AND VEGETABLE.												
Oil and grease	9	4	...	10	...	5	...	136	...	155	...	155
Soap, candles, &c.	25	20	25	22	38	59	72	336	73	428	208	636
Total, Class 2	34	24	25	32	38	55	72	472	73	583	208	791
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.												
Asphalt	10	3	...	6	...	8	...	93	...	110	...	110
Bricks and tiles	155	125	...	231	...	233	...	3,021	...	3,610	...	3,610
Glass and glass bottles	8	15	3	70	4	82	3	736	1	903	11	914
Glass (ornamental)	31	12	...	96	1	66	5	320	9	494	15	509
Lime, plaster, and cement	15	8	...	9	...	15	...	683	...	715	...	715
Marble and slate	18	...	...	12	...	16	...	207	...	235	...	235
Modelling and fibrous plaster	32	10	...	24	...	35	...	205	...	274	...	274
Monumental masonry	22	2	...	10	...	12	...	198	...	222	...	222
Pottery and earthenware	17	53	...	74	...	55	...	495	17	677	17	694
Stone-dressing	53	1	...	9	...	28	...	830	...	868	...	868
Other works	26	1	...	20	...	24	...	386	...	431	...	431
Total, Class 3	397	230	3	561	5	574	8	7,174	27	8,539	43	8,582
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	1	...	...	...	...	...	...	2	...	2	...	2
Boxes and packing-cases	57	26	...	62	1	86	2	662	1	836	4	840
Cooperage	16	9	...	13	...	16	...	203	...	241	...	241
Joinery	353	90	2	346	4	369	...	2,578	3	3,383	9	3,392
Saw-milling—Timber	606	37	...	201	...	289	3	3,279	...	3,806	3	3,809
Firewood	225	5	...	14	...	17	...	335	...	371	...	371
Wood-turning	22	4	...	8	1	8	2	63	12	83	15	98
Other works	42	5	...	35	6	49	10	263	3	352	19	371
Total, Class 4	1,316	176	2	679	12	834	17	7,385	19	9,074	50	9,124
CLASS 5.—METAL WORKS, MACHINERY, &c.												
Agricultural implements	19	5	...	21	...	49	...	260	...	335	...	335
Brass and copper	66	64	5	86	8	103	7	672	5	925	25	950
Cutlery	30	2	9	26	4	36	6	106	1	170	20	190
Engineering	357	208	10	550	9	744	15	5,808	23	7,310	57	7,367
Galvanised iron	63	50	...	124	...	176	1	827	...	1,177	1	1,178
Iron works, foundries, and boilermaking	176	141	...	434	1	531	10	8,113	9	9,219	20	9,229
Iron safes and doors	5	6	...	11	...	19	...	97	...	133	...	133
Lead-mills	2	...	...	...	...	11	...	29	...	40	...	40
Railway carriage works	2	11	...	14	1	17	3	133	2	175	6	181
Smelting and ore dressing	7	3	...	8	...	12	...	353	...	376	...	376
Stoves and ovens	15	36	...	82	1	122	1	514	1	754	3	757
Tinsmithing	25	98	14	163	76	200	88	693	102	1,154	280	1,434
Wire-working	24	45	1	297	1	460	15	1,593	17	2,395	34	2,429
Other metal works	86	91	1	167	8	196	8	995	18	1,449	35	1,484
Plumbing	30	1	...	31	...	41	...	300	...	373	...	373
Farriery	32	1	...	7	...	8	...	90	...	106	...	106
Total, Class 5	939	762	40	2,021	109	2,725	154	20,583	178	26,091	481	26,572
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(a) Animal Food.												
Bacon	16	...	...	4	...	6	...	153	...	163	...	163
Butchers' smallgoods	1,002	14	4	40	4	71	...	1,310	13	1,435	21	1,456
Margarine	2	1	...	6	...	25	...	79	...	111	...	111
Meat-preserving	6	1	2	2	6	3	5	76	11	82	24	106
Total	1,026	16	6	52	10	105	5	1,618	24	1,791	45	1,836

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 13 years.		Over 13 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
CLASS 6.—CONNECTED WITH FOOD AND DRINK AND THE PREPARATION THEREOF—*continued.*												
(b) Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.												
Biscuits	9	180	184	120	204	80	214	311	289	691	891	1,582
Bread and pastry	1,501	63	10	325	25	366	42	2,970	144	3,724	221	3,945
Confectionery	212	74	198	105	355	173	469	733	357	1,085	1,379	2,464
Corn-flour and oatmeal	19	11	17	19	41	32	44	263	54	325	156	481
Flour-milling	64	1	...	34	1	63	4	585	1	683	6	689
Jam and fruit preserving	27	2	4	15	33	45	17	236	170	298	224	522
Pickles, sauces, and vinegar	7	2	6	2	13	16	22	28	50	48	91	139
Poultry foods and dog biscuits	9	10	...	13	...	14	...	164	1	201	1	202
Self-raising flour	5	...	1	2	8	3	19	21	13	26	41	67
Sugar-refining	4	2	6	10	8	19	2	611	6	642	22	664
Total	1,857	345	426	645	688	811	833	5,922	1,085	7,723	3,032	10,755
(c) Drinks and Stimulants.												
Aerated waters and cordials	176	14	13	89	23	93	20	515	24	711	80	791
Brewing	20	1	...	20	...	45	...	961	1	1,027	1	1,028
Condiments, coffee, spices, &c.	43	17	61	25	131	26	128	186	225	254	545	799
Distillery	1	...	...	...	...	...	...	39	...	39	...	39
Ice and refrigerating	228	13	...	48	...	74	6	882	2	1,017	8	1,025
Tea blending and packing	16	28	25	15	50	16	56	88	55	147	186	333
Wine, spirits, and beer bottling	57	...	...	18	...	59	7	369	66	446	73	519
Total	541	73	99	215	204	313	217	3,040	373	3,641	893	4,534
(d) Narcotics.												
Tobacco, cigars, and cigarettes	11	53	106	65	259	109	286	624	641	851	1,292	2,143
Total, Class 6	3,435	487	637	977	1,161	1,338	1,341	11,204	2,123	14,006	5,262	19,268
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(a) Textile.												
Woollen mills	18	101	178	88	239	95	314	695	743	979	1,474	2,453
(b) Dress.												
Boots and shoes:—Order made	589	31	17	63	8	87	10	963	24	1,144	49	1,193
Factory made	102	131	274	158	298	255	370	2,026	1,028	2,570	1,970	4,540
Clothing:—Men's slops	90	25	332	60	465	65	585	565	1,574	715	2,956	3,671
Women's slops	145	4	290	14	360	16	509	118	1,275	152	2,434	2,586
Tailoring	391	19	239	44	442	70	606	1,209	1,878	1,342	3,165	4,507
Corsets	8	2	98	2	138	4	169	9	197	17	602	619
Dressmaking and millinery:—												
Makers' material	190	6	310	5	517	8	593	31	1,270	50	2,690	2,740
Costomers' material	171	...	94	...	127	1	148	7	434	8	803	811
Dye works	30	6	2	3	18	15	21	135	74	159	115	274
Furriery	29	13	29	14	51	23	49	58	72	108	201	309
Hats and caps	30	36	77	42	156	63	188	320	352	461	773	1,234
Hosiery and knitting	68	35	248	46	358	76	592	257	697	414	1,895	2,309
Oilskin and waterproof clothing	7	...	1	...	7	1	15	12	49	13	72	85
Shirts, ties, and scarves	49	13	251	17	302	20	357	93	683	143	1,593	1,736
Umbrellas	8	4	17	7	18	1	34	30	51	42	120	162
Underclothing	93	6	239	4	310	19	297	59	603	88	1,449	1,537
Wigs and hair work	10	...	4	...	13	...	19	9	28	9	64	73
Total	2,010	331	2,512	479	3,588	724	4,562	5,901	10,289	7,435	20,951	28,386
(c) Fibrous Materials and Textiles not elsewhere included.												
Bags and sacks	10	18	59	24	70	19	85	103	114	164	328	492
Rope and twine	8	25	20	49	16	36	6	85	18	195	60	255
Tents and tarpaulins	16	8	7	10	12	13	20	49	87	80	126	206
Total	34	51	86	83	98	68	111	237	219	439	514	953
Total, Class 7	2,062	483	2,776	650	3,925	887	4,987	6,833	11,251	8,853	22,939	31,792
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	18	9	1	21	6	22	8	86	15	138	30	168
Electrotyping and stereotyping, type founding, and printers' materials	15	5	5	14	4	16	9	85	6	120	24	144
Paper bags and boxes	15	52	152	40	173	43	188	133	300	268	813	1,081
Paper mills, cardboard, and strawboard	8	11	14	35	38	32	57	317	80	395	189	584
Photo.-engraving, photo.-lithography, and photo. materials	56	10	39	15	56	21	72	134	200	180	367	547
Printing, bookbinding, and manufacturing stationery	537	288	244	571	427	714	440	4,208	783	5,781	1,894	7,675
Total, Class 8	649	375	455	696	704	848	774	4,963	1,384	6,882	3,317	10,199
CLASS 9.—MUSICAL INSTRUMENTS, &C.												
Pianos, organs, and sewing-machines	32	20	...	67	3	88	31	454	43	629	77	706

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Class 10.—Arms and Explosives.												
Explosives	5	...	1	...	3	2	...	15	2	17	6	23
Class 11.—Vehicles and Fittings, Saddlery, Harness, &c.												
Coaches and waggons	238	34	...	130	...	157	...	1,050	...	1,371	...	1,371
Cycles and motor cars	775	227	...	676	5	612	13	3,559	31	5,054	49	5,103
Perambulators, &c.	7	19	1	10	...	16	4	119	1	164	6	170
Saddlery, harness, &c.	45	8	1	17	2	35	6	200	24	320	33	353
Naves, spokes, &c.	9	3	...	7	...	9	...	69	...	88	...	88
Whips	3	1	...	1	...	...	...	12	...	14	...	14
Total, Class 11	1,077	292	2	841	7	829	23	5,049	56	7,011	88	7,099
Class 12.—Shipbuilding, Fittings, &c.												
Docks and slips	4	6	...	10	...	21	...	172	...	209	...	209
Sailmaking	4	...	...	...	...	...	...	14	5	14	5	19
Ship and boat building	27	4	...	39	...	47	...	690	...	780	...	780
Total, Class 12	35	10	...	49	...	68	...	876	5	1,003	5	1,008
Class 13.—Furniture, Bedding, &c.												
Bedding, flock, and upholstery	69	51	33	93	67	93	84	533	225	770	409	1,179
Carpet-sewing	3	...	1	5	8	...	8	18	39	23	56	79
Iron bedsteads	5	11	...	22	...	23	...	197	...	253	...	253
Billiard tables	1	...	2	3	1	11	2	73	36	87	41	128
Chair-making	19	8	...	30	...	48	...	185	...	271	...	271
Furniture and cabinet making—												
European	249	79	...	470	...	448	3	2,007	10	3,004	13	3,017
Chinese	35	1	...	2	...	...	...	271	...	274	...	274
Bamboo and wicker	13	2	2	5	1	10	...	102	10	119	13	132
Picture frames	28	12	3	16	10	19	11	89	41	136	65	201
Window blinds	12	4	2	7	3	11	1	61	16	83	22	105
Total, Class 13	434	168	43	653	90	663	109	3,536	377	5,020	619	5,639
Class 14.—Drugs, Chemicals, and By-products.												
Baking powder, blue, soda, &c.	22	12	42	16	70	16	77	99	61	143	250	393
Chemical works and drugs	74	44	84	52	112	64	141	389	203	549	540	1,089
Fertilisers	7	1	...	13	...	10	...	117	...	141	...	141
Perfumes and essences	17	12	13	14	38	29	38	59	38	114	127	241
Paints and varnishes	17	40	3	40	9	60	10	454	33	594	55	649
Other Minor Works	4	...	2	...	2	5	1	17	3	22	8	30
Total, Class 14	141	109	144	135	231	184	267	1,135	338	1,563	980	2,543
Class 15.—Surgical and Scientific Appliances.												
Optical instruments	35	7	10	33	9	24	9	107	9	171	37	208
Surgical instruments	3	...	...	...	1	2	1	17	4	19	6	25
Other Minor Works	4	...	...	1	1	2	...	5	1	8	2	10
Total, Class 15	42	7	10	34	11	28	10	129	14	198	45	243
Class 16.—Timepieces, Jewellery, and Platedware.												
Electroplating	34	12	...	18	3	33	1	157	6	220	10	230
Jewellery	74	13	14	36	27	83	38	460	58	592	137	729
Total, Class 16	108	25	14	54	30	116	39	617	64	812	147	959
Class 17.—Light, Heat, and Power.												
Electrical apparatus	107	107	15	263	33	334	46	1,082	53	1,786	147	1,933
Electric light and power works*	325	7	...	39	...	52	...	1,002	1	1,100	1	1,101
Gas works	42	6	...	18	...	39	...	1,271	...	1,334	...	1,334
Lamps and gas mantles	6	7	2	11	27	10	32	38	39	66	100	166
Hydraulic power	1	...	...	...	...	...	...	...	...	...	...	...
Coke works	11	3	...	14	...	14	...	492	...	523	...	523
Total, Class 17	492	130	17	345	60	449	78	3,885	93	4,809	248	5,057
Class 18.—Leatherware (excepting Harness and Saddlery).												
Fancy Leather	17	11	55	15	100	7	59	86	87	119	301	420
Leather belting	6	5	...	3	...	5	...	44	...	57	...	57
Portmanteaux	12	29	29	31	32	32	30	151	36	243	127	370
Other Minor Works	24	14	30	26	38	34	43	105	41	179	152	331
Total, Class 18	59	59	114	75	170	78	132	386	164	598	580	1,178
Class 19.—Minor Wares not elsewhere included.												
Baskets, wickerware, mats, matting	4	1	...	3	...	2	...	43	...	49	...	49
Brooms, brushes	29	30	13	19	19	23	21	196	29	268	82	350
Florists and seedsmen	8	3	9	3	9	1	9	20	6	27	33	60
Laundries—European†	162	3	70	8	210	19	259	261	1,152	291	1,691	1,982
Chinese	27	...	...	...	...	1	2	32	2	33	4	37
Rubber goods	9	35	47	45	81	87	141	626	433	793	702	1,495
Toys	29	17	3	35	9	12	15	61	5	125	32	157
Painting and sign-writing	10	9	1	26	2	19	2	551	...	605	5	610
Other Minor Works	28	21	59	40	43	35	37	157	46	253	185	438
Total, Class 19	306	119	202	179	373	199	486	1,947	1,673	2,444	2,734	5,178
Total, All Industries	11,836	3,557	4,486	8,152	6,977	10,115	8,551	78,947	17,902	100,771	37,916	138,687

*Including 243 electric lighting plants for picture shows, employing 275 persons.
†Charitable institutions doing outside laundry work are included in the number of factories registered.

Appendix II.

Factories, by Number of Persons employed—1921-1925.

Year.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																	
1921	2,603	1,604	751	340	187	152	96	44	78	22	26	10	6	8	3	4	5,934
1922	2,912	1,648	776	342	206	161	103	49	73	34	32	8	7	10	3	3	6,367
1923	3,147	1,647	763	347	171	198	90	44	66	37	25	14	3	8	5	3	6,573
1924	3,246	1,756	822	349	187	197	96	48	61	43	29	11	6	9	4	4	6,868
1925	3,310	1,738	828	353	187	198	106	59	73	32	29	8	8	8	5	5	6,947
Newcastle District.																	
1921	598	258	89	29	11	12	7	...	3	3	2	3	1	...	...	1	1,017
1922	676	269	86	28	15	9	5	..	5	2	4	...	...	...	1	...	1,100
1923	836	185	83	32	9	7	4	3	5	3	2	...	...	...	1	1	1,171
1924	758	300	77	39	6	14	2	3	3	4	1	1	1	1	...	1	1,211
1925	784	295	95	29	15	10	4	3	3	1	1	2	...	1	1	1	1,245
Rest of State.																	
1921	2,195	707	170	25	18	7	3	1	4	2	..	2	1	1	...	...	3,136
1922	2,294	680	176	26	12	7	4	1	3	3	...	...	1	...	...	...	3,207
1923	2,587	475	183	34	14	4	3	2	6	1	2	...	...	2	1	...	3,314
1924	2,415	816	184	30	9	10	4	1	4	2	1	1	...	3	...	...	3,480
1925	2,616	786	177	33	9	6	4	2	3	2	2	1	...	2	1	...	3,644
State.																	
1921	5,396	2,569	1,010	394	216	171	105	45	85	27	28	15	8	9	3	5	10,087
1922	5,882	2,597	1,038	396	233	177	112	50	81	39	36	8	8	10	4	3	10,674
1923	6,570	2,307	1,034	413	194	209	97	49	77	41	29	14	3	10	7	4	11,058
1924	6,419	2,872	1,083	418	202	221	102	52	63	49	31	13	7	13	4	5	11,559
1925	6,710	2,819	1,100	415	211	214	114	64	79	35	32	11	8	11	7	6	11,836

Appendix III.

Factories, by Class and Number of Persons employed, 1925.

Class of Factory.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																	
I. Treating raw material, product of pastoral pursuits	50	30	17	9	3	4	1	2	2	2	...	...	1	...	...	...	121
II. Oils and fats—animal, vegetable, &c.	6	4	2	3	1	2	1	1	...	...	...	...	1	...	...	...	21
III. Processes relating to stone, clay, glass, &c. ...	43	65	44	24	22	19	6	4	3	2	1	1	...	1	..	...	235
IV. Working in wood	212	143	50	16	2	14	5	3	4	1	...	...	...	...	...	...	448
V. Metal works, machinery, &c.	268	210	111	46	23	28	16	11	14	4	7	...	1	...	1	2	737
VI. Connected with food and drink, &c.	1,136	254	81	30	14	17	8	10	5	3	2	1	2	3	2	1	1,569
VII. Clothing and textile fabrics, &c.	760	387	222	98	66	52	35	11	22	9	11	2	2	4	1	...	1,682
VIII. Books, paper, printing, engraving, &c.	132	138	69	49	12	26	6	7	6	4	4	2	1	...	...	...	441
IX. Musical instruments, &c.	13	6	2	6	1	1	1	...	...	...	...	1	...	...	...	...	31
X. Arms and explosives	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XI. Vehicles and fittings, saddlery, harness, &c. ...	237	151	42	17	7	13	12	1	4	..	...	...	...	...	...	...	484
XII. Ship and boat building, &c.	9	7	4	2	1	...	1	...	1	1	1	...	...	...	1	...	28
XIII. Furniture, bedding, &c.	124	116	56	31	12	10	3	4	7	2	...	...	...	...	...	...	366
XIV. Drugs, chemicals, and by-products	44	42	23	5	3	2	4	1	2	2	...	...	...	...	...	...	129
XV. Surgical and other scientific instruments	22	10	4	1	1	...	...	...	...	...	...	...	...	...	...	...	38
XVI. Jewellery and plated-ware, &c.	56	28	13	2	3	1	...	...	...	...	...	...	...	...	...	...	103
XVII. Heat, light and power	109	30	20	5	6	2	6	2	1	...	2	1	...	...	...	1	185
XVIII. Leatherware (excepting saddlery and harness) ...	11	20	11	7	5	2	...	1	1	..	1	...	...	...	...	...	59
XIX. Minor wares not elsewhere included	76	94	57	17	4	11	3	1	...	1	...	...	..	...	...	1	265
Total	3,310	1,738	828	353	187	198	106	59	73	32	29	8	8	8	5	5	6,947
Newcastle District.																	
I. Treating raw material, product of pastoral pursuits	14	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	15
II. Oils and fats—animal, vegetable, &c.	1	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	4
III. Processes relating to stone, clay, glass, &c. ...	21	19	7	6	2	2	...	...	...	...	...	...	...	...	...	...	57
IV. Working in wood	120	58	33	4	5	1	...	1	...	...	...	...	...	...	...	...	222
V. Metal work, machinery, &c.	35	31	8	4	1	1	1	...	1	...	1	2	...	1	1	1	88
VI. Connected with food and drink, &c.	382	48	9	6	1	1	...	1	1	...	...	...	...	...	...	...	449
VII. Clothing and textile fabrics, &c.	54	49	14	4	3	2	2	1	...	...	...	...	...	...	...	...	129
VIII. Books, paper, printing, engraving, &c.	15	21	4	1	1	2	...	...	...	...	...	...	...	...	...	...	44
IX. Musical instruments, &c.	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XI. Vehicles and fittings, saddlery, harness, &c. ...	62	37	7	...	1	...	...	...	...	...	...	...	...	...	...	...	107
XII. Ship and boat building, &c.	4	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	7
XIII. Furniture, bedding, &c.	13	15	4	1	...	...	1	...	...	...	...	...	...	...	...	...	34
XIV. Drugs, chemicals, and by-products	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	4
XV. Surgical and other scientific instruments	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XVI. Jewellery and plated-ware, &c.	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XVII. Heat, light and power	53	8	3	1	...	1	...	...	...	...	...	...	...	...	...	...	66
XIX. Minor wares, n.e.i.	3	4	2	2	1	...	...	...	...	...	...	...	...	...	...	...	12
Total	784	295	95	29	15	10	4	3	3	1	1	2	...	1	1	1	1,245

Appendix III—*continued.*

Class of Factory.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Rest of State.																	
I. Treating raw material, product of pastoral pursuits	89	43	4	1	...	...	...	...	...	...	...	...	...	...	...	...	137
II. Oils and fats—animal, vegetable, &c.	6	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
III. Processes relating to stone, clay, glass, &c. ...	34	38	18	6	4	2	...	1	...	...	...	1	...	1	...	...	105
IV. Working in wood	422	154	57	9	1	3	...	...	...	...	...	...	...	...	...	...	646
V. Metal work, machinery, &c.	62	40	5	2	...	...	1	...	...	...	2	...	...	1	1	...	114
VI. Connected with food and drink, &c.	1,253	126	30	3	...	...	...	...	3	2	...	...	...	...	...	...	1,417
VII. Clothing and textile fabrics, &c.	107	118	18	2	2	...	3	1	...	...	...	...	...	...	...	...	251
VIII. Books, paper, printing, engraving, &c.	93	55	13	3	...	...	...	...	...	...	...	...	...	...	...	...	164
XI. Vehicles and fittings, saddlery, harness, &c. ...	318	151	15	2	...	...	...	...	...	...	...	...	...	...	...	...	486
XIII. Furniture, bedding, &c.	22	10	2	...	...	...	...	...	...	...	...	...	...	...	...	...	34
XIV. Drugs, chemicals, and by-products	5	...	2	...	...	1	...	...	...	...	...	...	...	...	...	...	8
XV. Surgical and other scientific instruments	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XVI. Jewellery and plated-ware, &c.	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
XVII. Heat, light and power	190	38	8	4	1	...	...	...	...	...	...	...	...	...	...	...	241
XIX. Minor wares, n.e.i.	12	10	5	1	1	...	...	...	...	...	...	...	...	...	...	...	29
Total	2,616	786	177	33	9	6	4	2	3	2	2	1	...	2	1	...	3,644
State.																	
I. Treating raw materials, product of pastoral pursuits	153	73	21	10	3	4	1	2	3	2	...	...	1	...	...	...	273
II. Oils and fats—animal, vegetable, &c.	13	9	2	3	1	2	1	1	...	1	...	...	1	...	...	...	34
III. Processes in stone, clay, glass, &c.	98	122	69	36	28	23	6	5	3	2	1	2	...	2	...	...	397
IV. Working in wood	754	355	140	29	8	18	3	4	4	1	...	...	...	...	...	...	1,316
V. Metal works, machinery, &c.	365	281	124	46	25	29	18	11	15	4	10	2	1	2	3	3	939
VI. Connected with food and drink, &c.	2,771	428	120	39	15	18	8	11	9	5	2	1	2	3	2	1	3,425
VII. Clothing and textile fabrics, &c.	921	554	254	104	71	54	40	13	22	9	11	2	2	4	1	...	2,062
VIII. Books, paper, printing, and engraving, &c. ...	240	214	86	44	13	22	6	7	6	4	4	2	1	...	...	...	649
IX. Musical instruments, &c.	13	6	3	6	1	1	1	...	...	...	...	...	...	...	...	...	32
X. Arms and explosives	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XI. Vehicles and fittings, saddlery and harness, &c. ...	617	339	64	19	8	13	12	1	4	...	...	...	...	...	...	...	1,077
XII. Ship and boat building, &c.	13	8	6	2	1	...	1	...	1	1	1	...	...	...	1	...	35
XIII. Furniture, bedding, &c.	159	141	62	32	12	10	4	4	7	3	...	...	...	...	...	...	434
XIV. Drugs, chemicals, and by-products	51	43	26	5	3	3	4	1	3	2	...	...	...	...	...	...	141
XV. Surgical and other scientific instruments	26	10	4	1	1	...	...	...	...	...	...	...	...	...	...	...	42
XVI. Jewellery and plated-ware, &c.	60	29	13	2	3	1	...	...	...	...	...	...	...	...	...	...	108
XVII. Heat, light, and power	352	76	31	10	7	3	6	2	1	...	2	1	...	...	...	1	492
XVIII. Leatherware, n.e.i.	11	20	11	7	5	2	...	1	1	...	1	...	...	...	...	...	59
XIX. Minor wares, n.e.i.	91	108	64	20	6	11	3	1	...	1	...	...	...	...	...	1	306
Total	6,710	2,819	1,100	415	211	214	114	64	79	35	32	11	8	11	7	6	11,836

Appendix IV.

Persons employed, by Class of Factory, Classified by Industry—1925.

Metropolitan District.

Class of Factory.	Number of Factories on Register.	Persons employed.									
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Class 1.—Treating Raw Material, the Product of Pastoral Pursuits.												
(a) *Animal Products.*												
Boiling-down and tallow-refining	8	1	...	4	...	8	...	110	...	123	...	123
Glue	2	...	...	...	44	3	20	102	11	105	75	180
Tanning	65	35	...	43	1	50	3	859	5	987	9	996
Wool-scouring and fellmongering	16	6	1	15	...	37	...	548	2	606	3	609
Other animal products	4	14	...	21	...	9	...	71	...	115	...	115
Total	95	56	1	83	45	107	23	1,690	18	1,936	87	2,023
(b) *Vegetable Products.*												
Chaff-cutting	26	...	...	...	...	...	...	45	...	45	...	45
Total, Class 1	121	56	1	83	45	107	23	1,735	18	1,981	87	2,068
Class 2.—Oils and Fats—Animal and Vegetable.												
Oil and grease	7	4	...	10	...	5	...	133	...	152	...	152
Soap, candles, &c.	14	15	18	12	33	39	59	225	63	291	173	464
Total, Class 2	21	19	18	22	33	44	59	358	63	443	173	616

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.												
Asphalt	8	3	...	4	...	7	...	73	...	87	...	87
Bricks and tiles	71	104	...	191	...	184	...	2,283	...	2,762	...	2,762
Glass and glass bottles	8	15	3	70	4	82	3	736	1	903	11	914
Glass (ornamental)	29	12	...	95	1	62	5	314	9	483	15	498
Lime, plaster, and cement	6	1	...	1	...	4	...	40	...	46	...	46
Marble and slate	15	...	...	12	...	16	...	192	...	220	...	220
Modelling and fibrous plaster	22	5	...	12	...	28	...	164	...	209	...	209
Monumental masonry	20	1	...	7	...	6	...	142	...	156	...	156
Pottery and earthenware	13	53	...	72	...	52	...	455	17	632	17	649
Stone-dressing	21	1	...	3	...	23	...	280	...	307	...	307
Other works	22	1	...	17	...	24	...	382	...	424	...	424
Total, Class 3	235	196	3	484	5	488	8	5,061	27	6,229	43	6,272
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	1	...	...	...	...	...	...	2	...	2	...	2
Boxes and packing-cases	45	20	...	52	1	75	2	597	1	744	4	748
Cooperage	9	9	...	10	...	15	...	184	...	218	...	218
Joinery	219	73	2	241	4	261	...	1,898	3	2,473	9	2,482
Saw-milling—Timber	69	27	...	82	...	104	3	844	...	1,057	3	1,060
Firewood	51	2	...	7	...	6	...	116	...	131	...	131
Wood-turning	20	4	...	8	1	8	2	60	12	80	15	95
Other works	34	5	...	29	6	43	10	214	3	291	19	310
Total, Class 4	448	140	2	429	12	512	17	3,915	19	4,996	50	5,046
CLASS 5.—METAL WORKS, MACHINERY, &C.												
Agricultural implements	10	4	...	20	...	41	...	218	...	283	...	283
Brass and copper	65	64	5	85	8	102	7	660	5	911	25	936
Cutlery	30	2	9	26	4	35	6	105	1	168	20	188
Engineering	279	181	10	453	9	629	15	4,597	23	5,860	57	5,917
Galvanised iron	51	48	...	79	...	132	1	506	...	765	1	766
Iron works, foundries, and boilermaking	115	91	...	293	1	354	10	3,818	9	4,556	20	4,576
Iron safes and doors	5	6	...	11	...	19	...	97	...	133	...	133
Lead-mills	2	...	...	...	...	11	...	29	...	40	...	40
Railway carriage works	2	11	...	14	1	17	3	133	2	175	6	181
Smelting and ore dressing	4	1	...	3	...	10	...	80	...	94	...	94
Stoves and ovens	13	36	...	74	1	115	1	495	1	720	3	723
Tinsmithing	20	90	14	153	74	187	87	648	101	1,078	276	1,354
Wire-working	19	30	1	135	1	204	...	836	...	1,205	2	1,207
Other metal works	82	77	1	145	8	182	8	978	18	1,382	35	1,417
Plumbing	17	1	...	21	...	23	...	226	...	271	...	271
Farriery	23	...	...	4	...	3	...	61	...	68	...	68
Total, Class 5	737	642	40	1,516	107	2,064	138	13,487	150	17,709	445	18,154
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(a) *Animal Food.*												
Bacon	9	...	...	2	...	6	...	109	...	117	...	117
Butchers' smallgoods	539	7	3	20	4	44	...	719	12	790	19	809
Margarine	2	1	...	6	...	25	...	79	...	111	...	111
Meat-preserving	4	...	2	2	6	3	5	64	11	69	24	93
Total	554	8	5	30	10	78	5	971	23	1,087	43	1,130
(b) *Vegetable Foods, including Products not Food but usually connected with the manufacture of Foods.*												
Biscuits	8	175	183	119	203	78	211	304	288	676	885	1,561
Bread and pastry	568	33	8	181	23	217	37	1,615	117	2,046	185	2,231
Confectionery	159	67	194	101	343	165	453	675	347	1,008	1,337	2,345
Corn-flour and oatmeal	14	4	15	4	31	6	16	101	29	115	91	206
Flour-milling	19	1	...	9	1	23	4	281	1	314	6	320
Jam and fruit preserving	19	1	4	15	33	42	17	214	170	272	224	496
Pickles, sauces, and vinegar	6	2	6	2	13	16	22	26	50	46	91	137
Poultry foods and dog biscuits	9	10	...	13	...	14	...	164	1	201	1	202
Self-raising flour	5	...	1	2	8	3	19	21	13	26	41	67
Sugar-refining	1	1	6	4	8	7	2	277	6	289	22	311
Total	808	294	417	450	663	571	781	3,678	1,022	4,993	2,883	7,876
(c) *Drinks and Stimulants.*												
Aerated waters and cordials	23	1	...	40	19	49	13	212	18	302	50	352
Brewing	9	...	...	12	...	35	...	839	...	886	...	886
Condiments, coffee, spices, &c.	38	14	48	24	106	25	118	180	222	243	494	737
Distillery	1	...	...	...	...	...	...	39	...	39	...	39
Ice and refrigerating	85	3	...	10	...	41	6	424	1	478	7	485
Tea blending and packing	16	28	25	15	50	16	56	88	55	147	186	333
Wine, spirits, and beer bottling	24	...	...	16	...	56	5	292	66	364	71	435
Total	196	46	73	117	175	222	198	2,074	362	2,459	808	3,267
(d) *Narcotics.*												
Tobacco, cigars, and cigarettes	11	53	106	65	259	109	286	624	641	851	1,292	2,143
Total, Class 6	1,569	401	601	662	1,107	980	1,270	7,347	2,048	9,390	5,026	14,416

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males	Females.	Males.	Females.	Total.
Class 7.—Clothing and Textile Fabrics, and Fibrous Materials.												
(a) *Textile.*												
Woollen mills	15	95	167	83	229	91	298	668	705	937	1,399	2,336
(b) *Dress.*												
Boots and shoes—Order made	486	19	7	43	6	59	6	771	21	892	40	932
Factory made	93	128	265	149	276	235	363	1,944	1,006	2,456	1,910	4,366
Clothing—Men's slops	86	24	322	59	439	65	545	551	1,508	699	2,814	3,513
Women's slops	140	3	271	14	347	16	493	116	1,253	149	2,364	2,513
Tailoring	208	12	189	30	314	40	384	736	1,476	818	2,363	3,181
Corsets	8	2	98	2	138	4	169	9	197	17	602	619
Dressmaking and millinery—												
Makers' material	164	6	292	5	487	8	556	31	1,187	50	2,522	2,572
Customers' material	144	...	87	...	106	1	123	7	386	8	702	710
Dye works	25	6	2	2	16	14	21	125	73	147	112	259
Furriery	28	13	29	14	51	23	49	56	72	106	201	307
Hats and caps	29	36	77	42	156	63	188	319	352	460	773	1,233
Hosiery and knitting	64	35	245	46	353	75	586	255	689	411	1,873	2,284
Oilskin and waterproof clothing	7	...	1	...	7	1	15	12	49	13	72	85
Shirts, ties, and scarves	46	13	241	14	296	20	342	88	671	135	1,550	1,685
Umbrellas	8	4	17	7	18	1	34	30	51	42	120	162
Underclothing	92	5	214	2	295	18	276	57	584	82	1,369	1,451
Wigs and hair work	9	...	4	...	13	...	16	9	22	9	55	64
Total	1,637	306	2,361	429	3,318	643	4,166	5,116	9,597	6,494	19,442	25,936
(c) *Fibrous Materials and Textiles not elsewhere included.*												
Bags and sacks	8	18	59	22	70	18	85	95	113	153	327	480
Rope and twine	8	25	20	49	16	36	6	85	18	195	60	255
Tents and tarpaulins	14	8	7	10	12	12	19	45	87	75	125	200
Total	30	51	86	81	98	66	110	225	218	423	512	935
Total, Class 7 ...	1,682	452	2,614	593	3,645	800	4,574	6,009	10,520	7,854	21,353	29,207
Class 8.—Books, Paper, Printing, Engraving.												
Die-sinking and engraving	18	9	1	21	6	22	8	86	15	138	30	168
Electrotyping and stereotyping, type founding, and printers' materials	15	5	5	14	4	16	9	85	6	120	24	144
Paper bags and boxes	13	52	148	40	171	43	187	131	299	266	805	1,071
Paper mills, cardboard, and strawboard ...	8	11	14	35	38	32	57	317	80	395	189	584
Photo-engraving, photo-lithography, and photo. materials	49	10	37	14	51	21	67	127	192	172	347	519
Printing, bookbinding, and manufacturing stationery	338	240	239	453	419	579	421	3,508	762	4,780	1,841	6,621
Total, Class 8	441	327	444	577	689	713	749	4,254	1,354	5,871	3,236	9,107
Class 9.—Musical Instruments, &c.												
Pianos, organs, and sewing machines ...	31	20	...	65	3	87	31	446	43	618	77	695
Class 10.—Arms and Explosives.												
Explosives	5	...	1	...	3	2	...	15	2	17	6	23
Class 11.—Vehicles and Fittings, Saddlery, Harness, &c.												
Coaches and waggons	78	16	...	59	...	77	...	478	...	630	...	630
Cycles and motor cars	370	167	...	496	5	458	12	2,682	31	3,803	48	3,851
Perambulators, &c.	7	19	1	10	...	16	4	119	1	164	6	170
Saddlery, harness, &c.	25	5	1	10	2	21	6	178	23	214	32	246
Naves, spokes, &c.	2	...	...	...	...	6	...	35	...	41	...	41
Whips	2	1	...	...	...	...	...	11	...	12	...	12
Total, Class 11	484	208	2	575	7	578	22	3,503	55	4,864	86	4,950
Class 12.—Shipbuilding Fittings, &c.												
Docks and slips	3	6	...	10	...	17	...	160	...	193	...	193
Sailmaking	3	...	...	...	...	...	...	13	5	13	5	18
Ship and boat building	22	3	...	35	...	42	...	669	...	749	...	749
Total, Class 12	28	9	...	45	...	59	...	842	5	955	5	960

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 13.—FURNITURE, BEDDING, &c.												
Bedding, flock, and upholstery	59	48	33	89	65	83	84	512	223	732	405	1,137
Carpet-sewing	3	...	1	5	8	...	8	18	39	23	56	79
Iron bedsteads	5	11	...	22	...	23	...	197	...	253	...	253
Billiard tables	1	...	2	3	1	11	2	73	36	87	41	128
Chair-making	18	8	...	29	...	48	...	183	...	268	...	268
Furniture and cabinet-making—												
European	196	73	...	408	...	381	1	1,804	8	2,666	9	2,675
Chinese	34	1	...	2	...	...	...	269	...	272	...	272
Bamboo and wicker	12	2	2	5	1	8	...	93	10	113	13	126
Picture frames	28	11	3	16	10	18	11	87	41	132	65	197
Window blinds	10	4	2	6	3	11	1	60	16	81	22	103
Total, Class 13	366	158	43	585	88	583	107	3,301	373	4,627	611	5,238
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c.	20	12	42	16	70	16	77	99	61	143	250	393
Chemical works and drugs	69	40	84	50	110	56	140	339	291	485	535	1,020
Fertilisers	5	...	...	1	...	...	...	35	...	36	...	36
Perfumes and essences	16	10	13	13	38	28	38	51	38	102	127	229
Paints and varnishes	15	40	3	39	9	60	10	450	33	589	55	644
Other minor works	4	...	2	...	2	5	1	17	3	22	8	30
Total, Class 14 ...	129	102	144	119	229	165	266	991	336	1,377	975	2,352
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	31	7	9	32	9	24	9	102	9	165	36	201
Surgical instruments...	3	...	...	...	1	2	1	17	4	19	6	25
Other minor works	4	...	...	1	1	2	...	5	1	8	2	10
Total, Class 15	38	7	9	33	11	28	10	124	14	192	44	236
CLASS 16.—TIMEPIECES, JEWELLERY, AND PLATED WARE.												
Electroplating	32	12	...	18	3	33	1	154	6	217	10	227
Jewellery	71	13	14	36	27	82	38	451	58	582	137	719
Total, Class 16	103	25	14	54	30	115	39	605	64	799	147	946
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	100	105	15	234	33	284	46	903	53	1,526	147	1,673
Electric light and power works*	67	...	...	23	...	23	...	490	...	536	...	536
Gas works	8	6	...	13	...	35	...	1,010	...	1,064	...	1,064
Lamps and gas mantles	6	7	2	11	27	10	32	38	39	66	100	166
Hydraulic power	1	...	...	...	...	...	...	...	...	...	...	...
Coke works	3	...	...	1	...	5	...	82	...	88	...	88
Total, Class 17	185	118	17	282	60	357	78	2,523	92	3,280	247	3,527
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy leather	17	11	55	15	100	7	59	86	87	119	301	420
Leather belting	6	5	...	3	...	5	...	44	...	57	...	57
Portmanteaux	12	29	29	31	32	32	30	151	36	243	127	370
Other minor works	24	14	30	26	38	34	43	105	41	179	152	331
Total, Class 18	59	59	114	75	170	78	132	386	164	598	580	1,178
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting ...	4	1	...	3	...	2	...	43	...	49	...	49
Brooms, brushes	24	28	13	18	19	22	21	184	20	252	82	334
Florists and seedsmen	7	3	9	3	9	1	9	19	6	26	33	59
Laundries—European †	136	3	61	7	148	14	211	231	1,075	255	1,495	1,750
Chinese	21	...	...	...	...	1	2	26	1	27	3	30
Rubber goods	9	35	47	45	81	87	141	626	433	793	702	1,495
Toys	28	17	3	35	9	12	15	59	5	123	32	155
Painting and signwriting	10	9	1	26	2	19	2	506	...	560	5	565
Other minor works	26	9	59	32	43	30	37	140	46	211	185	396
Total, Class 19	265	105	193	169	311	188	438	1,834	1,595	2,296	2,537	4,833
Total, All Industries ...	6,947	3,044	4,260	6,368	6,555	7,948	7,961	56,736	16,952	74,096	35,728	109,824

* These figures include 58 electric lighting plants for picture shows, employing 59 persons.

† Charitable institutions doing outside laundry work are now included in the number of factories registered.

Appendix V.

Persons employed, by Class of Factory—1921-25.

Class of Factory.	1921.	1922.	1923.	1924.	1925.
METROPOLITAN DISTRICT.					
I. Treating raw material, product of pastoral pursuits	2,185	2,390	2,246	1,959	2,068
II. Oils and fats—animal, vegetable, &c.	849	862	764	696	616
III. Processes relating to stone, clay, glass, &c.	5,210	5,500	5,768	5,801	6,272
IV. Working in wood	4,259	4,819	5,098	5,063	5,046
V. Metal works, machinery, &c.	14,185	14,684	16,611	17,445	18,154
VI. Connected with food and drink, &c.	13,775	14,437	13,857	14,731	14,416
VII. Clothing and textile fabrics, &c.	26,145	28,585	27,393	27,600	29,207
VIII. Books, paper, printing, engraving, &c.	7,444	8,001	8,608	8,914	9,107
IX. Musical instruments, &c.	472	638	686	678	695
X. Arms and explosives	17	22	32	31	23
XI. Vehicles and fittings, saddlery, harness, &c.	3,371	4,051	4,602	4,457	4,950
XII. Ship and boat building, &c.	1,869	1,150	1,760	1,073	960
XIII. Furniture, bedding, &c.	3,924	4,498	4,731	5,035	5,238
XIV. Drugs, chemicals, and by-products	2,085	2,207	2,129	2,206	2,352
XV. Surgical and other scientific instruments	155	184	187	182	236
XVI. Jewellery and plated-ware, &c.	861	891	787	980	946
XVII. Heat, light, and power	3,279	2,557	3,120	3,475	3,527
XVIII. Leatherware (excepting saddlery and harness)	1,147	1,249	1,055	1,048	1,178
XIX. Minor wares, n.e.i.	3,927	3,965	3,922	4,399	4,833
Total	95,159	100,690	103,356	105,773	109,824
NEWCASTLE DISTRICT.					
I. Treating raw material, product of pastoral pursuits	177	131	165	196	175
II. Oils and fats—animal, vegetable, &c.	219	195	176	179	150
III. Processes relating to stone, clay, glass, &c.	431	382	415	480	525
IV. Working in wood	1,396	1,347	1,525	1,457	1,430
V. Metal works, machinery, &c.	6,587	2,490	5,738	6,209	5,927
VI. Connected with food and drink, &c.	1,283	1,273	1,294	1,361	1,354
VII. Clothing and textile fabrics, &c.	1,269	1,366	1,293	1,104	1,066
VIII. Books, paper, printing, engraving, &c.	280	269	324	342	351
IX. Musical instruments, &c.	7	8	7	10	11
XI. Vehicles and fittings, saddlery, harness, &c.	354	392	404	394	472
XII. Ship and boat building, &c.	101	55	62	39	47
XIII. Furniture, bedding, &c.	218	209	223	243	249
XIV. Drugs, chemicals, and by-products	43	80	88	128	124
XV. Surgical and other scientific instruments	5	5	6	4	6
XVI. Jewellery and plated-ware, &c.	30	16	16	13	10
XVII. Heat, light and power	774	263	795	800	724
XIX. Minor wares, n.e.i.	130	99	128	144	148
Total	13,304	8,571	12,569	13,103	12,769
REST OF STATE.					
I. Treating raw material, product of pastoral pursuits	371	381	496	386	483
II. Oils and fats—animal, vegetable, &c.	26	22	30	27	25
III. Processes relating to stone, clay, glass, &c.	1,494	1,329	1,795	1,699	1,785
IV. Working in wood	2,238	2,261	2,659	2,563	2,648
V. Metal work, machinery, &c.	2,080	2,150	2,648	2,467	2,491
VI. Connected with food and drink, &c.	3,010	3,024	3,021	3,499	3,498
VII. Clothing and textile fabrics, &c.	1,467	1,495	1,553	1,606	1,619
VIII. Books, paper, printing, engraving, &c.	703	681	738	738	741
XI. Vehicles and fittings, saddlery, harness, &c.	1,547	1,439	1,505	1,597	1,677
XII. Ship and boat building, &c.	.....	.....	.....	.....	1
XIII. Furniture, bedding, &c.	126	124	156	141	152
XIV. Drugs, chemicals, and by-products	28	46	80	75	67
XV. Surgical and other scientific instruments	3	2	2	1	1
XVI. Jewellery and plated-ware, &c.	13	12	13	10	3
XVII. Heat, light and power	700	718	781	838	806
XIX. Minor wares, n.e.i.	115	132	159	193	197
Total	13,921	13,816	15,636	15,840	16,094
STATE.					
I. Treating raw material, product of pastoral pursuits	2,733	2,902	2,907	2,541	2,726
II. Oils and fats—animal, vegetable, &c.	1,094	1,079	970	902	791
III. Processes relating to stone, clay, glass, &c.	7,135	7,211	7,978	7,980	8,582
IV. Working in wood	7,893	8,427	9,282	9,083	9,124
V. Metal work, machinery, &c.	22,852	19,324	24,997	26,121	26,572
VI. Connected with food and drink, &c.	18,068	18,734	18,172	19,591	19,268
VII. Clothing and textile fabrics, &c.	28,881	31,446	30,149	30,310	31,792
VIII. Books, paper, printing, engraving, &c.	8,427	8,942	9,670	9,994	10,199
IX. Musical instruments, &c.	579	646	693	688	706
X. Arms and explosives	17	22	32	31	23
XI. Vehicles and fittings, saddlery, harness, &c.	5,272	5,881	6,511	6,448	7,099
XII. Ship and boat building, &c.	1,970	1,205	1,822	1,112	1,008
XIII. Furniture, bedding, &c.	4,268	4,831	5,110	5,419	5,639
XIV. Drugs, chemicals, and by-products	2,156	2,333	2,297	2,409	2,543
XV. Surgical and other scientific instruments	163	191	195	187	243
XVI. Jewellery and plated-ware, &c.	904	919	816	1,003	959
XVII. Heat, light, and power	4,753	3,539	4,696	5,113	5,057
XVIII. Leatherware (excepting saddlery and harness)	1,147	1,249	1,055	1,048	1,178
XIX. Minor wares, n.e.i.	4,172	4,196	4,209	4,736	5,178
Total	122,384	123,077	131,561	134,716	138,687

Appendix VI.

Persons employed, by Age Groups—1921-1925.

Metropolitan District.

Year.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		Over 21 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1921	5,934	2,449	3,425	5,341	5,561	6,210	6,934	49,850	15,389	63,850	31,309	95,159
1922	6,367	2,574	3,859	5,456	5,924	7,244	7,542	51,614	16,477	66,838	33,802	100,690
1923	6,573	2,825	3,951	5,585	5,925	7,513	7,645	54,099	15,813	70,022	33,334	103,356
1924	6,868	2,949	3,893	6,166	6,100	7,753	7,794	54,774	16,344	71,642	34,131	105,773
1925	6,947	3,044	4,260	6,368	6,555	7,948	7,961	56,736	16,952	74,096	35,728	109,824

Newcastle District.

1921	1,017	194	170	734	323	754	351	10,307	471	11,989	1,315	13,304
1922	1,100	161	181	620	384	730	377	5,671	447	7,182	1,389	8,571
1923	1,171	201	143	800	287	921	342	9,427	448	11,349	1,220	12,569
1924	1,211	173	107	786	271	946	360	10,016	444	11,921	1,182	13,103
1925	1,245	201	132	830	225	979	335	9,608	459	11,618	1,151	12,769

Rest of State.

1921	3,136	260	70	748	170	861	239	11,111	462	12,980	941	13,921
1922	3,207	257	95	815	217	879	214	10,914	425	12,865	951	13,816
1923	3,314	253	116	957	262	1,040	225	12,305	478	14,555	1,081	15,636
1924	3,480	294	98	915	238	1,126	265	12,404	500	14,739	1,101	15,840
1925	3,644	312	94	954	197	1,188	255	12,603	491	15,057	1,037	16,094

State.

1921	10,087	2,903	3,665	6,823	6,054	7,825	7,524	71,268	16,322	88,819	33,565	122,384
1922	10,674	2,992	4,135	6,891	6,525	8,853	8,133	68,199	17,349	86,935	36,142	123,077
1923	11,058	3,279	4,210	7,342	6,474	9,474	8,212	75,831	16,739	95,926	35,635	131,561
1924	11,559	3,416	4,098	7,867	6,609	9,825	8,419	77,194	17,288	98,302	36,414	134,716
1925	11,836	3,557	4,486	8,152	6,977	10,115	8,551	78,947	17,902	100,771	37,916	138,687

Appendix VII.

Horse-power of Machinery, by Class of Factory and Method of Production, Classified by Industry, 1925.

METROPOLITAN DISTRICT.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 1.—TREATING RAW MATERIALS, &c.									
Boiling-down and tallow refining	6	140	109	2	126	86	4	270	223
Glue	1	660	420	...	...	...	3	734	472
Tanning	23	473	275	11	347	238	48	2,275	1,734
Woolscouring and fellmongering and packing skins	11	885	567	2	22	21	17	2,058	453
Chaff-cutting	...	...	...	2	18	13	21	457	375
Total	41	2,158	1,371	17	513	358	93	5,794	3,257
CLAS 2.—OILS AND FATS.									
Oil and grease	4	154	111	1	12	10	5	164	91
Soap and candles	4	750	310	...	...	...	10	1,677	1,247
Total	8	904	421	1	12	10	15	1,841	1,338
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.									
Asphalt	2	16	3	...	...	...	7	70	68
Bricks and tiles	29	4,049	2,498	9	396	329	49	7,102	5,617
Glass and glass bottles	2	454	351	...	...	...	8	1,090	782
Glass (ornamental)	1	9	4	1	3	2	20	306	219
Cement	...	...	...	...	...	...	3	55	41
Marble and slate	...	...	...	2	18	11	14	758	526
Modelling and fibrous plaster	...	...	...	...	...	...	14	136	127
Monumental masons	1	10	8	...	...	...	4	111	88
Pottery and earthenware	6	495	384	2	59	29	6	438	336
Stone-dressing	4	78	76	3	300	235	16	838	742
Other works	2	55	42	3	378	150	15	783	614
Total	47	5,166	3,366	20	1,154	756	156	11,687	9,100
CLASS 4.—WORKING IN WOOD.									
Incubators	...	...	...	...	...	...	1	2	2
Boxes and packing-cases	2	590	500	1	2	2	39	977	884
Cooperage	...	...	...	...	...	...	8	216	180
Joinery	6	389	297	17	225	133	183	3,409	2,662
Saw-milling—timber	27	4,855	3,745	3	63	27	49	6,566	5,156
firewood	27	359	276	3	45	45	18	319	297
Wood-turning	...	...	...	1	3	1	16	142	122
Other works	1	18	18	...	...	...	34	794	724
Total	63	6,211	4,836	25	338	208	348	12,425	10,027
CLASS 5.—METAL WORKS, MACHINERY, &c.									
Agricultural implements	...	...	...	3	106	78	8	219	165
Brass and copper	1	230	230	2	5	5	63	689	559
Cutlery	...	...	...	...	...	...	29	315	251
Engineering	21	4,195	2,419	15	523	348	254	8,589	5,690
Galvanised iron	1	8	6	1	6	6	35	490	443
Iron works, foundries, and boiler-making	6	653	405	9	73	53	101	3,614	3,083
Iron safes and doors	...	...	...	...	...	...	5	229	103
Lead-mills	1	200	200	...	...	...	2	84	84
Railway carriage works	1	140	...	...	...	...	1	68	68
Smelting and ore-dressing	1	32	24	...	...	...	2	581	124
Stoves and ovens	...	...	...	1	25	15	12	1,429	1,055
Tinsmithing	...	...	...	2	109	62	16	664	540
Wire-working	...	...	...	...	...	...	17	2,472	2,388
Other metal works	...	...	...	4	357	164	66	1,441	1,021
Plumbing	...	...	...	...	...	...	8	37	37
Farriery	...	...	...	1	4	4	7	29	27
Total	32	5,558	3,284	38	1,208	735	626	20,950	15,638
CLASS 6.—CONNECTED WITH FOOD AND DRINK, &c.									
Bacon	4	177	147	...	...	...	8	335	320
Butchers' small-goods	8	91	78	15	81	57	502	2,205	2,000
Margarine	1	36	31	...	...	...	2	300	270
Meat-preserving	...	...	...	...	...	...	3	499	374
Biscuits	1	25	...	...	...	...	7	1,210	674
Bread and pastry	12	100	69	14	87	77	239	1,363	1,192
Confectionery	6	988	866	1	20	15	84	3,795	2,918
Corn-flour and oatmeal	2	18	16	...	...	...	9	1,363	825
Flour-milling	2	1,105	847	1	20	15	17	2,431	2,005
Jam and fruit preserving	4	40	13	...	...	...	13	311	258
Pickles, sauces, and vinegar	2	12	8	...	...	...	2	67	65
Dog biscuits and poultry foods	...	...	...	...	...	...	10	804	735
Self-raising flour	...	...	...	1	2	2	5	198	182
Sugar refining	1	179	157	...	...	...	1	4,495	4,495
Aerated waters	2	18	4	2	10	5	19	416	362
Brewing	4	3,806	2,263	1	15	10	6	2,758	1,962
Condiments, Eastern goods, &c.	5	469	402	1	36	26	28	537	458
Distillery	...	...	...	...	...	...	1	268	268
Ice and refrigerating	12	5,473	4,659	16	1,419	1,026	74	4,541	3,685
Tea-blending	2	17	12	...	...	...	13	369	338
Wines and spirits	1	45	...	1	15	...	11	73	73
Tobacco, cigars, &c.	3	1,188	830	...	...	...	8	853	428
Total	72	13,787	10,402	53	1,705	1,243	1,062	29,281	23,887

Appendix VII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, &c.									
Woollen mills	6	1,100	649	1	220	180	14	3,865	3,171
Boots and shoes—order and repairing	...	...	...	7	15	15	462	615	560
factory made	1	250	150	3	128	119	86	1,411	1,241
Clothing—men's slops	...	...	...	1	38	38	66	444	413
women's slops	...	...	...	...	...	...	120	303	277
tailoring	...	...	...	...	...	...	75	116	83
Corsets	...	...	...	...	...	...	5	102	86
Dressmaking—makers' materials	...	...	...	2	10	9	60	110	100
customers' materials	...	...	...	...	...	...	39	109	105
Dye works	5	69	52	...	...	...	17	237	200
Furriery	...	...	...	...	...	...	15	90	69
Hats and caps	5	302	263	1	3	3	28	662	564
Hosiery, knitting, &c.	6	96	58	1	5	2	55	834	736
Oilskins and waterproof clothing	1	6	2	...	...	...	7	22	16
Shirts, ties, and scarfs	...	...	...	1	18	...	51	270	241
Umbrellas	...	...	...	1	10	5	6	29	27
Underclothing	1	3	2	2	3	2	80	221	205
Wigs and hairwork	...	...	...	...	...	...	1	1	...
Bags and sacks	...	...	...	...	...	...	5	343	286
Rope and twine	...	...	...	1	401	320	6	303	267
Tents and tarpaulins	...	...	...	...	...	...	13	49	45
Total	25	1,826	1,176	21	851	693	1,211	10,136	8,692
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.									
Die-sinking and engraving	...	...	...	...	...	...	17	77	67
Electro and stereo-typing, printers' materials, &c.	...	...	...	1	5	5	11	189	173
Paper bags and boxes	1	25	...	1	20	14	11	390	361
Paper-mills	2	2,000	1,677	1	73	...	5	2,856	849
Photo.-engraving, photo. materials, &c.	...	...	...	...	...	...	14	91	62
Printing, bookbinding, and stationery	2	170	130	30	361	243	302	8,003	6,197
Total	5	2,195	1,807	33	459	262	360	11,606	7,709
CLASS 9.—MUSICAL INSTRUMENTS, &c.									
Pianos and sewing-machines	...	...	...	...	...	...	22	593	560
CLASS 10.—ARMS AND EXPLOSIVES.									
Explosives	...	...	...	...	...	...	3	32	26
CLASS 11.—VEHICLES, SADDLERY, HARNESS, &c.									
Coaches and waggons	1	8	6	2	18	17	55	539	408
Cycles and motor-cars	2	12	12	13	76	56	323	2,236	1,864
Perambulators	...	...	...	...	...	...	6	28	25
Saddlery and harness	...	...	...	...	...	...	15	75	67
Naves and spokes	1	85	85	...	...	...	1	170	150
Whips	...	...	...	...	...	...	...	...	...
Total	4	105	103	15	94	73	400	3,048	2,494
CLASS 12.—SHIPBUILDING, &c.									
Docks and slips	3	2,010	2,010	...	...	...	1	1,120	1,028
Sailmaking	...	...	...	...	...	...	3	5	5
Ship and boat building	4	298	138	3	45	42	18	361	303
Total	7	2,308	2,148	3	45	42	22	1,496	1,336
CLASS 13.—FURNITURE, BEDDING, &c.									
Bedding and flock	2	78	46	1	3	2	44	838	778
Carpet-sewing	...	...	...	...	...	...	6	58	57
Iron bedsteads	...	...	...	...	...	...	5	398	398
Billiard-tables	...	...	...	...	...	...	1	56	50
Chair-making	1	50	45	1	4	4	14	196	177
Furniture—European	1	45	40	7	85	62	170	3,238	2,809
Chinese	...	...	...	...	...	...	16	166	142
Bamboo and Wicker	...	...	...	...	...	...	...	...	...
Picture frames	...	...	...	...	...	...	25	97	91
Window blinds	...	...	...	...	...	...	8	20	15
Total	4	173	131	9	92	68	289	5,067	4,517
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.									
Blue, baking-powder, soda, &c.	1	12	12	...	...	...	15	672	505
Chemical works and drugs	5	102	43	1	16	5	50	1,258	1,016
Fertilisers	1	14	10	...	...	...	3	150	89
Perfumes and essences	2	78	40	...	...	...	12	168	153
Paints and varnishes	1	9	7	...	...	...	16	2,168	807
Other minor works	...	...	...	...	...	...	2	307	223
Total	10	215	112	1	16	5	98	4,723	2,793

Appendix VII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.									
Optical instruments	...	...	...	...	...	...	31	98	84
Surgical instruments	...	...	...	...	...	...	4	10	9
Other minor works	...	...	...	...	...	...	4	4	4
Total	...	...	...	...	...	...	39	112	97
CLASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.									
Electro-plating	...	...	...	1	26	16	31	294	258
Jewellery	...	...	...	...	...	...	66	217	192
Total	...	...	...	1	26	16	97	511	450
CLASS 17.—LIGHT, HEAT, AND POWER.									
Electrical apparatus	...	...	...	...	...	...	92	734	634
Electric light and power works*	2	126,218	56,450	37	1,432	856	39	7,301	1,647
Gas	4	2,625	1,939	4	811	642	7	3,326	1,161
Lamps and gas mantles	...	...	...	...	...	...	4	93	70
Hydraulic power	...	...	...	...	...	...	...	...	...
Coke works	1	90	70	...	...	...	2	712	516
Total	7	128,933	58,459	41	2,243	1,498	144	12,166	4,028
CLASS 18.—LEATHERWARE (EXCEPTING SADDLERY AND HARNESS).									
Fancy leather	1	10	5	...	...	...	16	215	161
Leather belting	...	...	...	...	...	...	6	57	50
Portmanteaux and bags	...	...	...	1	14	6	8	95	86
Othor minor works	1	15	...	1	5	5	20	70	61
Total	2	25	5	2	19	11	50	437	358
CLASS 19.—MINOR WARES (NOT ELSEWHERE INCLUDED.									
Baskets, &c.	...	...	...	...	...	...	1	6	6
Brooms and brushes	...	...	...	...	...	...	22	143	133
Florists and seedsmen	...	...	...	...	...	...	4	57	30
Laundries—European	20	284	173	7	39	32	114	1,121	976
,, Chinese	...	...	...	...	...	...	1	5	3
Rubber goods	1	802	611	...	...	...	8	2,847	1,970
Toys	...	...	...	1	5	3	20	96	77
Painting and signwriting	...	...	...	...	...	...	2	4	4
Other minor works	1	45	30	...	...	...	15	163	153
Total	22	1,131	814	8	44	35	187	4,442	3,352
Total, All Classes	349	170,695	88,435	288	8,819	6,013	5,222	136,347	99,719

*NOTE.—These figures include 382 gas plants using 420 h.p., and 33 electric and oil plants using 465 h.p., for lighting purposes at Picture Shows.

Appendix VIII.

Horse-power of Machinery used and Method of Production, by Class of Factory, 1925.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
METROPOLITAN DISTRICT.									
I. Treating raw materials, product of pastoral pursuits	41	2,158	1,371	17	513	358	93	5,794	3,257
II. Oils and fats—animal, vegetable, &c.	8	904	421	1	12	10	15	1,841	1,338
III. Processes in stone, clay, glass, &c.	47	5,166	3,366	20	1,154	756	156	11,687	9,160
IV. Working in wood	63	6,211	4,836	25	338	208	348	12,425	10,027
V. Metal works, machinery, &c.	32	5,558	3,284	38	1,208	735	626	20,950	15,638
VI. Connected with food and drink, &c.	72	13,787	10,402	53	1,705	1,243	1,062	29,281	23,887
VII. Clothing and textile fabrics, &c.	25	1,826	1,176	21	851	693	1,211	10,136	8,692
VIII. Books, paper, printing, and engraving, &c.	5	2,195	1,807	33	459	262	360	11,606	7,709
IX. Musical instruments, &c.	...	...	...	...	...	...	22	593	560
X. Arms and explosives	...	...	...	...	...	...	3	32	26
XI. Vehicles and fittings, saddlery and harness, &c	4	105	103	15	94	73	400	3,048	2,494
XII. Ship and boat building, &c.	7	2,308	2,148	3	45	42	22	1,496	1,336
XIII. Furniture, bedding, &c.	4	173	131	9	92	68	289	5,067	4,517
XIV. Drugs, chemicals, and by-products	10	215	112	1	16	5	98	4,723	2,793
XV. Surgical and other scientific instruments	...	...	...	...	...	...	39	112	97
XVI. Jewellery and plated-ware, &c.	...	...	...	1	26	16	97	511	450
XVII. Heat, light, and power	7	128,933	58,459	41	2,243	1,498	144	12,166	4,028
XVIII. Leatherware, n.e.i.	2	25	5	2	19	11	50	437	358
XIX. Minor wares, n.e.i.	22	1,131	814	8	44	35	187	4,442	3,352
Total	349	170,695	88,435	288	8,819	6,013	5,222	136,347	99,719

Appendix VIII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
Newcastle District									
I. Treating raw materials, product of pastoral pursuits	1	210	210	...	...	...	12	654	523
II. Oils and fats—animal, vegetable, &c.	3	245	111	...	...	...	2	122	75
III. Processes in stone, clay, glass, &c.	20	974	656	...	...	...	12	660	238
IV. Working in wood	135	4,278	2,932	9	97	74	62	885	699
V. Metal works, machinery, &c.	10	62,945	31,235	6	63	44	53	35,032	6,813
VI. Connected with food and drink, &c.	40	2,840	1,769	34	967	764	174	2,400	1,944
VII. Clothing and textile fabrics, &c.	1	15	12	...	...	...	55	403	248
VIII. Books, paper, printing and engraving, &c. ...	...	...	...	7	138	97	34	314	268
XI. Vehicles and fittings, saddlery and harness, &c. ...	6	134	126	9	28	23	71	301	240
XII. Ship and boat building, &c.	5	62	41	1	4	2	...	...	...
XIII. Furniture, bedding, &c.	1	12	8	7	77	55	17	210	189
XIV. Drugs, chemicals, &c.	1	42	30	...	...	...	2	45	22
XV. Surgical and other scientific instruments	...	...	...	...	...	...	3	3	3
XVI. Jewellery and plated-ware, &c.	...	...	...	...	...	...	3	13	13
XVII. Heat, light, and power	8	5,351	3,907	22	941	620	38	2,208	1,788
XIX. Minor wares, n.e.i.	4	60	44	2	32	16	6	47	43
Total	235	77,168	41,081	97	2,347	1,695	544	43,297	13,106
Rest of State.									
I. Treating raw materials, product of pastoral pursuits	90	1,390	697	10	126	32	27	421	292
II. Oils and fats—animal, vegetable, &c.	6	53	37	...	...	...	...	...	...
III. Processes in stone, clay, glass, &c.	39	10,875	7,168	3	384	345	40	12,939	7,516
IV. Working in wood	374	8,141	5,584	46	639	496	173	2,289	1,679
V. Metal works, machinery, &c.	11	16,616	13,225	23	299	172	60	8,318	5,222
VI. Connected with food and drink, &c.	139	8,884	5,777	185	4,699	3,332	485	5,807	4,374
VII. Clothing and textile fabrics, &c.	2	114	94	14	126	98	78	386	283
VIII. Books, paper, printing, engraving, &c.	1	12	9	41	247	131	141	762	610
XI. Vehicles and fittings, saddlery and harness, &c. ...	5	91	64	90	647	458	303	1,469	1,139
XIII. Furniture, bedding, &c.	4	243	131	6	34	32	19	97	67
XIV. Drugs, chemicals, &c.	4	57	16	1	4	4	4	558	445
XV. Surgical and other scientific instruments, &c ...	...	...	...	...	...	...	1	1	1
XVI. Jewellery and plated-ware, &c.	...	...	...	...	...	...	1	2	2
XVII. Heat, light, and power	38	11,852	8,748	94	6,031	4,781	113	3,588	2,850
XIX. Minor wares, n.e.i.	9	146	114	3	71	64	14	116	91
Total	722	58,474	41,664	516	13,307	9,945	1,459	36,753	24,571
State.									
I. Treating raw materials, product of pastoral pursuits	132	3,758	2,278	27	639	390	132	6,869	4,072
II. Oils and fats—animal, vegetable, &c.	17	1,202	569	1	12	10	17	1,963	1,413
III. Processes in stone, clay, glass, &c.	106	17,015	11,190	23	1,538	1,101	208	25,286	16,914
IV. Working in wood	572	18,630	13,352	80	1,074	778	583	15,599	12,405
V. Metal works, machinery, &c.	53	85,119	47,744	67	1,570	951	739	64,300	27,673
VI. Connected with food and drink, &c.	251	25,511	17,948	272	7,371	5,339	1,721	37,488	30,205
VII. Clothing and textile fabrics, &c.	28	1,955	1,282	35	977	791	1,344	10,925	9,223
VIII. Books, paper, printing, and engraving, &c. ...	6	2,207	1,816	81	844	490	535	12,682	8,587
IX. Musical instruments, &c.	...	...	...	...	...	...	22	593	560
X. Arms and explosives, &c.	...	...	...	...	...	...	3	32	26
XI. Vehicles and fittings, saddlery and harness, &c. ...	15	330	293	114	769	554	774	4,818	3,873
XII. Ship and boat building, &c.	12	2,370	2,189	4	49	44	22	1,496	1,336
XIII. Furniture, bedding, &c.	9	428	270	22	203	155	325	5,374	4,773
XIV. Drugs, chemicals, and by-products	15	314	158	2	20	9	104	5,326	3,260
XV. Surgical and other scientific instruments	...	...	...	...	...	...	43	116	101
XVI. Jewellery and plated-ware, &c.	...	...	...	1	26	16	101	526	465
XVII. Heat, light, and power	53	146,136	71,114	157	9,215	6,899	295	17,962	8,666
XVIII. Letherware, n.e.i.	2	25	5	12	19	11	50	437	358
XIX. Minor wares, n.e.i.	35	1,337	972	13	147	115	207	4,605	3,486
Total	1,306	306,337	171,180	901	24,473	17,653	7,225	216,397	137,396

Appendix IX.

Horse-power of Machinery used and Method of Production—1921–1925.

Year.	Steam.		Gas.		Electricity and other.		Total.	
	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	*No. of Factories.	Horse-power.
Metropolitan District.								
1921	332	80,969	432	8,160	3,920	65,009	4,734	154,138
1922	336	76,174	401	7,306	4,258	71,862	4,995	155,342
1923	348	80,287	384	6,906	4,517	80,105	5,249	167,298
1924	354	83,968	337	6,988	4,938	91,493	5,629	182,449
1925	349	88,435	288	6,013	5,222	99,719	5,859	194,167
Newcastle District.								
1921	229	30,454	117	1,186	334	9,863	680	41,503
1922	204	7,905	119	1,370	391	10,229	714	19,504
1923	210	37,395	121	1,611	425	9,783	756	48,789
1924	248	39,509	107	1,497	525	11,667	880	52,673
1925	235	41,081	97	1,695	544	13,103	876	55,882
Rest of State.								
1921	594	27,507	490	6,966	933	8,456	2,017	42,929
1922	600	27,180	504	7,931	1,032	10,631	2,136	45,742
1923	651	27,519	436	8,399	1,127	12,108	2,264	48,026
1924	752	41,529	534	8,906	1,277	24,845	2,563	75,280
1925	722	41,664	516	9,945	1,459	24,571	2,697	76,180
State.								
1921	1,205	138,930	1,039	16,312	5,187	83,328	7,431	238,570
1922	1,140	111,259	1,024	16,607	5,681	92,722	7,845	220,588
1923	1,209	145,201	991	16,916	6,069	101,996	8,269	264,113
1924	1,354	165,006	978	17,391	6,740	128,005	9,072	310,402
1925	1,306	171,180	901	17,653	†7,225	†137,396	9,432	326,229

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using power.

† Including 81 factories using oil of 1,713 horse-power (Metropolitan District).
" 129 " " 488 " (Newcastle District).
" 649 " " 5,274 " (Rest of State).
" 859 " " 7,475 " (State).

Appendix X.

Employment of Children.

Certificates of Fitness by class of Factory in Districts, 1925.

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Class 1.—Treating Raw Material—the Products of Pastoral Pursuits									
Tanneries	38	1	...	...	...	...	...	...	39
Wool scouring	7	1	...	...	...	...	...	...	8
Class 2.—Oils and Fats—Animal and Vegetable.									
Kerosene and oil	37	...	...	...	...	...	...	...	37
Soap, &c.	29	34	6	11	...	...	...	...	80
Class 3.—Processes in Stone, Clay, Glass, &c.									
Glass and bottle	56	1	...	...	...	...	...	...	57
Marble and slate	3	...	...	...	...	...	...	...	3
Potteries and bricks	203	...	4	...	...	...	...	...	208
Lime and cement	4	...	1	...	...	...	1	...	9
							4	...	
Class 4.—Working in Wood									
Sawmills and joinery ...	123	3	16	...	...	...	16	...	158
Class 5.—Metal Works and Machinery, &c.									
Brass and copper	78	6	...	...	...	...	2	...	86
Engineering	281	16	44	...	...	...	2	...	343
Ironworks, stoves, &c. ...	186	10	25	...	1	...	...	...	222
Smelting and ore works ...	...	...	26	...	...	...	...	...	26
Wire works	67	...	48	...	...	...	...	...	115

Appendix X—*continued.*

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males	Females.	
Class 6.—Connected with Food and Drink, and the Preparation thereof.									
Aerated waters	4	...	4	...	1	...	1	...	10
Biscuits	296	234	6	1	...	...	...	...	537
Bread and pastry	34	4	7	...	2	...	7	...	54
Breweries	...	...	...	...	...	...	...	...	...
Condiments	15	53	...	1	...	...	...	...	69
Confectionery	107	199	2	2	...	...	6	...	316
Flour mills	7	8	...	...	...	...	1	...	16
Groceries and packing ...	50	51	5	33	...	...	...	...	139
Ice and refrigerating ...	4	...	6	...	...	...	1	...	11
Jam	14	14	...	...	...	...	...	...	28
Meat preserving	15	...	18	...	...	...	3	...	36
Sugar mills	...	...	...	...	...	...	...	...	...
Tobacco	49	58	...	...	...	...	...	...	107
Class 7.—Clothing and Textile Fabrics, and Fibrous Materials.									
Artificial flowers	3	58	...	...	...	...	...	...	61
Boots and shoes	165	209	3	...	2	...	3	4	386
Calico bags	3	11	...	...	...	...	...	...	14
Clothing	56	441	4	36	...	...	1	20	558
Corsets	2	96	...	...	...	...	...	...	98
Cotton mills	18	25	...	...	...	...	...	...	43
Dressmaking	12	455	...	8	...	...	...	4	479
Hats and caps	60	163	...	1	...	...	...	...	224
Hosiery and knitting ...	39	267	...	...	...	...	...	1	307
Rope	73	28	...	...	...	...	...	...	101
Shirts	10	292	2	28	...	...	...	3	335
Tents, &c.	11	19	...	...	...	...	1	...	31
Umbrellas	11	14	...	...	...	...	...	...	25
Whiteworking	3	148	...	...	...	...	...	...	151
Woollen mills	77	124	...	...	...	...	11	10	222
Class 8.—Books, Papers, Printing, Engraving.									
Bookbinding	12	102	...	...	...	...	...	...	114
Paper boxes	84	147	...	4	...	...	...	...	235
Paper mills	8	5	...	...	...	...	...	...	13
Photography	4	22	...	...	...	...	...	...	26
Printing	260	82	18	4	2	...	28	...	394
Type founding	7	3	...	...	...	...	...	...	10
Class 9.—Musical Instruments, &c. Pianos, Organs and Sewing Machines.									
Musical instruments	9	...	...	...	...	...	...	...	9
Class 11.—Vehicles and Fittings, Saddlery, Harness, &c.									
Coachbuilding	20	...	1	...	...	...	1	...	22
Motors and cycles	138	2	10	1	...	...	16	...	167
Class 13.—Furniture, Bedding, &c.									
Bedsteads, bedding	29	8	...	...	...	...	...	...	37
Furniture	155	18	9	...	...	...	...	...	182
Class 14.—Drugs, Chemicals and By-Products.									
Chemicals and Blue	61	126	3	...	...	...	...	...	190
Paints and varnishes ...	30	3	1	...	...	...	...	...	34
Class 16.—Timepieces, Jewellery and Plated Ware.									
Jewellery	56	14	2	...	...	...	...	...	72
Class 17.—Light, Heat, and Power.									
Electric light, &c.	174	18	...	...	...	...	1	...	193
Class 18.—Leatherware, excepting Harness and Saddlery.									
Leather bags, &c.	104	131	...	...	...	...	...	...	235
Class 19.—Minor Wares not elsewhere included.									
Brooms	21	16	2	...	...	...	...	...	39
Cooperage	...	...	...	...	...	...	...	...	...
Laundries	1	58	1	12	...	...	...	5	77
Plumbers and tinsmiths ...	137	12	3	...	...	...	...	...	152
Rubber goods	55	37	2	...	...	...	...	...	94
Toys	15	5	...	...	...	...	...	...	20
Miscellaneous	38	31	6	...	1	...	12	...	88
Total	3,668	3,883	285	142	9	...	118	47	8,152

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Appendix XI.—Accidents by Machinery, 1922–25.

Machines.	1922.	1923.	1924.	1925.
Metal Working Machines—				
Drills	12	19	13	16
Emery wheels	39	49	38	40
Guillotines	4	5	2	1
Lathes	21	24	23	21
Milling	3	3	4	2
Polishing	4	...	2	2
Power presses	38	42	37	37
Riveting	2	3	3	1
Rolling	6	10	10	10
Screwing	2	...	2	1
Shaping	3	2	1	2
Shears	7	10	13	7
Slotting	2	...	4	...
Steam hammers	2	3	15	15
Wire-working	47	123	109	114
Other tinsmiths' machines	4	3	...	...
Other ironworking machines	18	18	44	18
	215	314	320	317
Woodworking Machines—				
Band saws	5	4	6	7
Boring	5	2	3	3
Circular moulders	20	21	33	22
Circular saws	95	74	77	72
Jointers	28	35	19	...
Lathes	1	3	1	2
Planers	10	10	36	38
Other woodworking machines	16	15	5	15
	180	164	180	159
Printing Machines—				
Cardboard box machines	...	12	12	3
Envelope machines	1	2	2	2
Guillotines	...	1	2	...
Platens	9	11	7	13
Printing machines	12	17	15	11
Wire-stitching machines	21	11	19	24
Other printing machines	13	7	13	39
	56	61	70	92
Food and Drink Machines—				
Biscuit machines	4	2	8	1
Confectionery machines	5	7	3	10
Crown corking machines	2	...	...	...
Dough brakes	1	8	7	2
Mincing	9	9	10	10
Mixing	2	2	1	3
Tobacco	7	5	10	4
Other food and drink machines	7	9	6	9
	37	42	45	39

Machines.	1922.	1923.	1924.	1925.
Stone, clay, &c., Machines—				
Brick presses	2	5	3	1
Pans	...	...	...	..
Tile presses	1	4	2	1
Other stone, &c., machines	3	1	1	1
	6	10	6	3
Leather Working Machines—				
Power presses	11	5	3	3
Rolling	2	2	...	3
Shaving	1	1	1	...
Other leather machines	7	10	5	11
	21	18	9	17
Clothing Machines—				
Band knives	...	1	...	..
Boot machines	6	11	9	2
Fur-cutting	...	...	...	...
Ropemaking	4	1	2	...
Sewing	9	8	8	7
Wool machines	10	9	10	11
Other clothing machines	6	5	2	7
	35	35	31	27
Laundry Machines—				
Calenders	6	8	6	4
Folding	...	...	...	...
Hydro-extractors	2	...	...	...
Ironing	4	2	3	4
	12	10	9	8
Rubber Working Machines—				
Power presses	...	...	...	...
Rolling	2	...	5	...
Other rubber machines	1	3	7	3
	3	3	12	3
Brushmaking machines	1	...	1	...
Paintmaking machines	2	...	...	1
Soapmaking machines	1	2	5	4
Miscellaneous Machines—				
Elevators and cranes	24	30	57	33
Engines	5	5	5	2
Fan	...	1	1	2
Mill gearing	66	57	87	82
Other machines	13	4	31	23
	112	99	187	147
Total	677	756	869	812

Appendix XII.—Prosecutions by Districts, 1921–25.

Year.	Informations Laid.	Convictions.	Dismissals.	Withdrawals.
		Metropolitan.		
1921	67	62	4	1
1922	46	46	.....	.....
1923	62	61	1	.....
1924	74	72	.....	2
1925	79	75	3	1
		Newcastle.		
1921	11	10	1	.....
1922	6	6	.....	.....
1923	1	1	.....	.....
1924	7	7	.....	.....
1925	7	7	.....	.....
		Rest of State.		
1921	3	3	.....	.....
1922	8	8	.....	.....
1923	7	7	.....	.....
1924	8	8	.....	.....
1925	6	6	.....	.....
		The State.		
1921	81	75	5	1
1922	60	60	.....	.....
1923	70	69	1	.....
1924	89	87	.....	2
1925	92	88	3	1

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1927.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

DEPARTMENT OF LABOUR AND INDUSTRY

REPORT

ON THE WORKING OF THE

FACTORIES AND SHOPS ACT, 1912,

DURING THE YEAR 1926.

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THE THIRTIETH SERIES OF ANNUAL REPORTS BY INSPECTORS APPOINTED UNDER THE FACTORIES AND SHOPS ACT, 1912, FURNISHED TO THE MINISTER FOR LABOUR AND INDUSTRY IN TERMS OF SECTION 19 OF THAT ACT.

The Under-Secretary, Department of Labour and Industry, to The Honorable the Minister for Labour and Industry.

Department of Labour and Industry,

Sir,

I have the honour to forward for submission to Parliament, in terms of section 19 of the Factories and Shops Act, 1912, Annual Reports on the operations of that Act by each of the Inspectors appointed thereunder, for the year ending the 31st December, 1926.

I have, &c.,
F. W. KITCHING,
Under-Secretary.

OFFICE OF THE CHIEF INSPECTOR OF FACTORIES AND INVESTIGATION OFFICER.*

Operations.

Report in terms of Section 19 of the Factories and Shops Act, 1912.

Arrangement of Inspectorial Districts.

The provisions of the Factories and Shops Act were extended to cover the whole of the State, as from the 1st July, 1915. The area outside of the Metropolitan District is divided up into Country Districts, and the following statement will show the arrangement of these districts at the close of 1926 :—

District.	Head Centre.	Staff.
Newcastle	Newcastle	Inspector Clark.
		,, Darbon.
		,, Dunwoodie.
North Coast	Lismore	,, Hastie.
North-Western	Tamworth	Senior Inspector Burkitt.
South Coast	Wollongong	Inspector Waugh.
South-Western	Goulburn	,, Wallace.
Southern	Wagga	,, McEvoy.
Western	Orange	,, Baker.
Broken Hill	Broken Hill	Superintending Inspector Huntley.

The Country District Officers, in addition to the work of factory inspection and investigations under the Industrial Arbitration Act, are required to carry out work under the Early Closing Acts as well as that pertaining to the departmental policy of Country Labour Exchanges.

Inquiries emanating from the Immigration Section of the department also devolved upon the Inspectors in both the metropolis and the country.

The following new appointments, interchanges of Inspectors between Metropolitan and Country Districts, and alteration in control of districts were made during the year :—

Mr. Superintending Inspector Huntley returned to head office from the Broken Hill District at the end of the year, and arrangements were made for Mr. Inspector Bennet to proceed to that district in his stead.

During May, Mr. Inspector Wallace transferred his home from Goulburn to the Metropolis, but still retained the oversight of the South Western District, operating from Head Office.

Mr. Inspector Dunwoodie took up duty at the Newcastle Office, relieving Mr. Inspector Armstrong, who returned to Head Office.

Senior Inspector Miss Golding, Senior Inspector Burkitt (Tamworth), and Mr. Inspector Jackson relinquished duty during the year prior to retirement from the service. In Miss Golding's case the retirement was voluntary; the other inspectors had reached the retiring age under the Public Service Act.

As their places were not filled, the staff was left depleted with correspondingly reduced results in the aggregate of inspections made during the year.

The appointments of Messrs. Inspectors Varley and Crozier were confirmed 7th May, 1926.

Statistics.

Cards of instruction served on the occupiers of factories within the Metropolitan District numbered 14,458 for 1926, as compared with 14,187 in 1925; in the Newcastle District, 2,005 in 1926, as against 2,074 in 1925; in the Broken Hill District, 91 in 1926, compared with 515 in 1925; in the rest of the State 4,748, as against 4,489 in the previous year.

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*Matters covered by the Boiler Inspection Regulations made under Section 62 of the Factories and Shops Act, 1912, are reported upon by the Departmental Engineer and Chief Inspector of Scaffolding and Lifts.

Returns collected from factory occupiers for 1926 show that at the date of collecting the returns (end of November, 1926) 11,829 factories throughout the State employed 151,622 persons, compared with 11,836 factories employing 138,687 persons at the end of 1925, a decrease of 7 factories and an increase of 12,935 persons. Male employment increased by 8,879, there being an increase of 2,666 under 21 years of age, and 6,213 over that age. Female employment increased by 4,056, there being an increase of 2,543 under 21 years of age and an increase of 1,513 over that age. Of the total persons employed, 109,650, or 72·3 per cent., were male, and 41,972, or 27·7 per cent., were female.

The following statement will show the increase or decrease in the number of factories and persons, males and females, employed therein, from the year 1915, when the whole of the State was brought under the provisions of the Act, to 1926 inclusive:—

Year.	Factories registered.	Increase over previous year.	Persons employed.		Total.	Increase over previous year.		Total.	Percentage of total increase.	
			Males.	Females.		Males.	Females.		Males.	Females
1915	7,425	1,432	70,517	28,706	99,223	7,181	1,901	9,082	79·1	20·9
1916	8,065	640	63,895	28,757	92,652	*6,622	51	*6,571	*100·8	0 8
1917	8,099	34	66,066	29,185	95,251	2,171	428	2,599	83·6	16·4
1918	8,346	247	74,719	31,246	105,965	8,653	2,061	10,714	80·8	19·2
1919	9,003	657	84,474	32,431	116,905	9,755	1,185	10,940	89·2	10·8
1920	9,745	742	92,566	33,479	126,045	8,092	1,048	9,140	88·6	11·4
1921	10,087	342	88,819	33,565	122,384	*3,747	86	*3,661	102·3	2·3
1922	10,674	587	86,935	36,142	123,077	*1,884	2,577	693	*271·9	371·9
1923	11,058	384	95,926	35,635	131,561	8,991	*507	8,484	*105·9	5·9
1924	11,559	501	98,302	36,414	134,716	2,376	779	3,155	75·3	24·7
1925	11,836	277	100,771	37,916	138,687	2,469	1,502	3,971	62·1	37·9
1926	11,829	*7	109,650	41,972	151,622	8,879	4,056	12,935	68·6	31·4

*Decrease.

The number of effective registrations of factories as at the 31st December, 1926, was 12,293, as compared with 11,981 at the close of the preceding year.

The following statement shows the numerical alteration in factory registrations at 31st December, 1925 and 1926 :—

District.	Registrations effective at 31st December, 1925.	1926.		Increase.	Registrations effective at 31st December, 1926.
		Registrations.	Cancellations.		
Metropolitan	7,069	1,528	1,325	+203	7,272
Newcastle	1,249	174	161	+ 13	1,262
Broken Hill	159	12	11	+ 1	160
Rest of State	3,504	595	500	+ 95	3,599
Total	*11,981	2,309	1,997	+212	*12,293

* Adjusted figures.

The figures in this table are compiled as at 31st December, and therefore differ from the figures in the text following, which are compiled as at end of November, the date on which the annual returns were collected.

Detailed figures as to the number and classes of factories, number and sex of employees, and horse-power of machinery used in the various districts of the State will be found in the Appendices I to XII.

At the end of November, 1926, there were 6,837 registered factories in the Metropolitan District, employing 121,983 persons, a decrease of 110 factories and an increase of 12,159 persons, compared with the figures at the end of the previous year. Of this increase, males represented an increase of 8,422, or 69·3 per cent., and females an increase of 3,737, or 30·7 per cent., 5,938, or 48·8 per cent., and 1,437, or 11·8 per cent., being respectively an increase of males and females over the age of 21 years. Of the total persons employed, males represented 82,518, and females 39,465, or 67·6 and 32·4 per cent. respectively. Only 8,467, or 6·9 per cent., were under 16 years of age; 14,344, or 11·8 per cent., were between 16 and 18 years; 18,109, or 14·9 per cent., were between 18 and 21 years; and the remainder, 81,063, or 66·4 per cent., were over 21 years of age.

Of the total males employed, 3,666, or 4·4 per cent., were under 16 years of age; 7,076, or 8·6 per cent., between 16 and 18 years; 9,102, or 11·1 per cent., between the ages of 18 and 21 years; and the remainder, 62,674, or 75·9 per cent., were over 21 years of age.

Of the total females employed, 4,801, or 12·2 per cent., were under 16 years of age; 7,268, or 18·4 per cent., between 16 and 18 years; 9,002, or 22·8 per cent., between the ages of 18 and 21 years; and the remainder, 18,389, or 47·6 per cent., were over 21 years of age.

It is satisfactory to report that out of a total employment in the Metropolitan District of 121,983 only 8,467, or 6·9 per cent., were under 16 years of age. A comparison of the figures of each sex under and over 21 years of age is somewhat interesting, inasmuch as it demonstrates that, whereas the difference between the number of females of these ages is slight, the excess of males over 21 years of age is large. There were more females than males under 21 years of age employed in the factories in the Metropolitan District, but the males over 21 years of age exceeded the number of females over that age in the proportion of more than 3 to 1.

During the period of 1912 to 1914 the percentages of boys and girls under 16 years of age remained about the same, but for the period 1914 to 1926 the percentage slightly increased, as the following table will show :—

Percentage distribution of persons under 16 years of age.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1912	2·3	2·9	5·2	1920	2·5	3·4	5·9
1913	2·2	2·8	5·1	1921	2·6	3·6	6·2
1914	2·3	2·9	5·2	1922	2·6	3·8	6·4
1915	2·8	3·1	5·9	1923	2·7	3·8	6·5
1916	2·6	3·3	5·9	1924	2·8	3·7	6·5
1917	2·5	3·4	5·9	1925	2·7	3·8	6·5
1918	2·4	3·3	5·7	1926	2·0	3·9	6·9
1919	2·6	3·4	6·0				

Taking the males and females under 16 years of age collectively, there was a slight decrease during 1913 over the previous year, but from 1914 to 1926 the percentage gradually increased, equalling in 1915, 1916, and 1917 that for 1920, as the table indicates. The percentage for 1918 was slightly below that for the three previous years, being 5·7 as against 5·9, but for 1923, 1924 and 1925 it was higher than for any year since 1909, when it was 6·8. The percentage for 1926 is the highest on record. The tendency seems to be for the percentage of females to increase steadily, whilst that of males fluctuates.

The industry class employing the greatest number of persons in 1926 was clothing and textile fabrics with 32,694, followed by metal works, machinery, &c., with 21,028, and food and drink, &c., with 15,650, these three classes accounting for 69,372 out of a total of 121,983 employed in all classes of factories in the Metropolitan District.

Clothing and textile fabrics showed an increase of 3,487, and metal works, &c., increased by 2,874 and food and drink by 1,234 as compared with 1925. The decreases in employment were in ship and boat building (44), and jewellery (51), and surgical appliances (8).

The following statement will show the increase or decrease in persons, males and females, from 1915 to 1926 inclusive :—

Year.	Persons employed.			Increase over previous year.			Percentage of total increase.	
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
1915	54,891	26,438	81,329	.....	.....	.....	.....	.....
1916	47,378	26,649	74,027	*7,513	211	*7,302	102·9	2·9
1917	48,927	27,223	76,150	1,549	574	2,123	72·9	27·1
1918	55,355	29,145	84,500	6,428	1,922	8,350	77·0	23·0
1919	62,030	30,309	92,339	6,675	1,164	7,839	85·2	14·8
1920	68,583	31,270	99,853	6,553	961	7,514	87·2	12·8
1921	63,850	31,309	95,159	*4,733	39	*4,694	*100·8	·8
1922	66,888	33 8 2	100,690	3,038	2,493	5,531	55·0	45·0
1923	70,022	33,334	103,356	3.134	*468	2,666	117·5	*17·5
1 24	71,642	34,131	105,773	1,620	797	2,417	67·0	33·0
1925	74,096	35,728	109,824	2,454	1,597	4,051	60·5	39·5
1926	82,518	39,465	121,893	8,422	3,737	12,159	69·3	30·7

* Decrease.

The following table shows the increase or decrease in number of factories and persons employed therein during the same period :—

Year.	Number of factories.	Increase over previous year.	Persons employed.	Increase over previous year.
1915	4,758	.....	81,329	.....
1916	4,814	56	74,027	*7,302
1917	4,799	*15	76,150	2,123
1918	4,942	143	84,500	8,350
1919	5,330	388	92,339	7,839
1920	5,842	512	99,853	7,514
1921	5,934	92	95,159	*4,694
1922	6,367	433	100,690	5,531
1923	6,573	206	103,356	2,666
1924	6,868	295	105,773	2,417
1925	6,947	79	109,824	4,051
1926	6,837	*110	121,983	12,159

* Decrease.

Total increase—2,079 factories, 40,654 persons.

As at 27th November, 1926, 1,217 registered factories in the Newcastle District employed 13,021 persons, of whom 11,752 or 90·2 per cent., were males, and 1,269, or 9·8 per cent., were females. 62·6 per cent. of the females employed in the Newcastle District and 17 per cent. of the males were under 21 years of age. The large percentage of adult male employment was due to a great extent to the number employed at the steel and iron works of the Broken Hill Proprietary Company, Limited, at Port Waratah, Rylands Bros. (Aust.) Limited, The Commonwealth Steel Products, Limited, and Lysaght's, Limited, aggregating 4,374, or nearly 45 per cent. of the total number of males over 21 years of age.

In the remainder of the State, there were on 27th November, 1926, on the records of the Department, 3,775 registered factories, employing 16,618 persons, of whom 15,380, or 92·5 per cent., were males, and 1,238, or 7·5 per cent., females. This was an increase of 131 factories and an increase of 524 persons, as compared with 1925.

Horse-power of Machinery.

At the end of the year 1926, 9,701 factories throughout the State were using machinery equal to 359,619 horse-power.

Steam power, representing 181,923 horse-power, was used in 1,289 factories; gas power (18,415 horse-power) in 893 factories; electricity and other (159,281 horse-power) in 7,519 factories.

Child Labour in Factories.

One hundred and eighty-seven children under 14 years of age (118 boys and 69 girls) were granted the special permission of the Minister to engage in factory employment. Nine thousand five hundred and fifty-three children were certified as physically fit for employment in certain classes of factories.

Following is a table showing the distribution of the foregoing permits and certificates in the districts in which the State is divided for departmental purposes:—

District.	Permits granted.			Certificates of Fitness.	
	Special (to children between 13 and 14 years of age).			Issued.	Declined.
	Males.	Females.	Total.		
Metropolitan	114	69	183	8,766	... ..
Newcastle	2	... ..	2	499	.....
Broken Hill	.....	.....	.....	7	.....
Rest of State	2	.....	2	281	.....
Total	118	69	187	9,553	.....

By way of comparison, the numbers of special permits granted during the last ten years are shown hereunder, and the allocation of the children who were granted certificates into the various industries is shown in Appendix X.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1917	115	28	143	1922	116	61	177
1918	134	31	165	1923	152	74	226
1919	200	37	237	1924	160	58	218
1920	142	38	180	1925	173	64	237
1921	125	44	169	1926	118	69	187

New Industries.

No new industry was established during the year, though there were many extensions of existing industries foreshadowing increased output and larger employment.

With the expansion of trade many firms found it necessary to arrange for more commodious premises, in some cases trebling their floor space.

Several industries recently introduced into the State have become firmly established and are now producing goods which compare more than favourably with the same type of article previously imported.

The remarkable growth in the motor trade has resulted in the erection of many modern buildings in which accessories of all kinds are now being manufactured.

One large American company decided to establish premises locally for the production of tyres, tubes, &c., and will, when the factory is in full operation, employ a large number of hands.

Overtime in Factories.

During 1926 the Minister granted applications for extensions of overtime in respect of 85 factories, affecting 2 male and 866 female employees. Similar permission was granted during the previous year in respect of 34 factories, involving 654 female employees, and the figures for 1923 were 18 factories, 5 males and 286 females.

The following table sets out the classes of factory in which the additional overtime was worked :—

Class of Factory.	Factories.	Employees.		Total.
		Male.	Female.	
Class V—				
Engineering	1	...	1	1
Tinsmithing	2	...	31	31
Other Metal Works	1	...	16	16
	4	...	48	48
Class VI—				
Meat Preserving	1	...	10	10
Confectionery	13	2	189	191
Condensed Milk	2	...	47	47
Tea Packing	6	...	25	25
	22	2	271	273
Class VII—				
Cotton Spinning	1	...	29	29
Tailoring	6	...	66	66
Corset Making	5	...	76	76
Dressmaking and Millinery	7	...	52	52
Hats and Caps	11	...	32	32
Hosiery	2	...	153	153
	32	...	408	408
Class VIII—Printing	22	...	97	97
Class XVI—Jewellery, &c.	1	...	6	6
Class XVIII—Leather Ware	1	...	14	14
Class XIX—				
Laundries	1	...	11	11
Other Minor Wares	2	...	11	11
	3	...	22	22
Total	85	2	866	868

Fencing and Guarding of Machinery.

It is satisfactory to note from the Inspectors' reports that the standard of fencing and guarding was materially improved during the year. In all districts there was a more general use of stanchions, tubular rails, and mesh wire fencing of substantial design and construction.

Many firms are now specially catering for mesh wire guarding, and as a result the old type of wooden guard is gradually being replaced by modern guards, which are not only more effective, but take up less space and are more pleasing to the eye.

Special attention was given, as in former years, to those machines at which accidents repeatedly occur, and the standard of guarding of circular saws, hand-planers, spindle-moulders and power presses was satisfactorily improved. Some of the accidents were serious, and in some cases investigation proved that the guards provided were not used by the employees who were injured, and practically all the inspectors, in their reports, comment upon the need for more co-operation in the matter of safety first between employer and employee.

The designers of factory machinery are, fortunately, giving increased attention to the economic value of providing guards as integral parts of machines.

Following is an analysis of the reported accidents, and the extent of injuries :—

Extent of Injury.	Accidents Reported.				
	District.				Total.
	Metropolitan.	Newcastle.	Broken Hill.	Rest of State.	
Fatal	10	3	...	1	15
Permanent Injury—					
Loss of arms	1	...	...	...	1
,, hands	5	...	...	...	5
,, fingers or parts	123	10	...	17	150
,, eye	1	...	...	...	1
,, foot or part	3	...	...	1	4
	133	10	...	18	161
Temporary Injury—					
Gas poisoning	...	...	...	...	...
Burns, scalds, &c.	77	47	...	2	126
Cuts, lacerations, bruises—					
On hands	335	65	...	15	415
,, arms	44	7	...	1	52
,, body	14	8	...	...	22
,, feet	9	2	...	...	11
,, head	13	32	...	7	52
Other	32	20	...	5	56
	524	181	...	30	734
Total	667	194	...	49	910

The following statement gives the distribution of accidents as due to machinery or other causes. Appendix XI contains details of machinery at which accidents happened.

Causes of Accident.

Machinery—

				Miscellaneous—	
Metal working	250	Paper, printing	91	Mill gearing	46
Woodworking	155	Leather	20	Engines	4
Stone, clay, &c.	12	Rubber	13	Elevators, conveyors, &c.	36
Food and drink	42	Laundry	17		
Clothing, &c.	45	Other	39		

Other Causes.

Dangerous substances—		Electricity	2
Steam	7	Chemicals	14
Hot substances—		Gas	9
Water	1	Other	17
Metal	65		
Other	25	Total	910

The following is a brief description of the fatal accidents reported :—

A labourer at an engineering works was working a sand shifting machine and when moving it from one position to another neglected to switch off the current before disconnecting the flexible lead. His hand came in contact with the live terminals and he was killed almost instantly.

At an explosion at a large sugar works, three men were killed and two injured as a result of shock and burns. The explosion was caused by the ignition and combustion of sugar dust by, possibly, the breaking of an electric light bulb. Sugar dust is very combustible and of a low flash point and, in the opinion of experts, could have been ignited as stated.

Following on an explosion of methylated spirits in a phonograph cabinet factory, one of the employees was caught by flames and his clothing ignited. He received such severe burns that he died the same day.

An employee in a large engineering works was tending a wire drawing block. The wire "looped" and caught the employee, who was whirled round at high speed several times. His left arm and leg were fractured and he received other severe injuries which resulted in his death.

An employee threw motor spirit, thinking it to be kerosene, on a fire and the contents of the tin exploded causing severe burns to the body, neck, face and arms and also shock, with the result that the employee died later in hospital.

A labourer in a large steel works was engaged in tightening a bolt at the side of a large shears, and just as he stood erect a steel bar, 20 feet long and 4 inches square, was moving towards the machine and his neck was crushed between the edge of the bar and the machine. He suffered a broken neck and died as the result.

The proprietor of a country sawmill was working at a circular saw when a length of timber, 10 feet by 6 inches by 1 inch, fell upon the revolving saw. Thrown forward with great force it struck the man on the chest, inflicting injuries which resulted fatally. A medical certificate was given of death from shock and subsequent cardiac asthenia.

A labourer in an engineering works was struck by a piece of a cast-iron pulley which worked off the end of a shaft, crushing his skull.

An employee was assisting in repairing an axle hammer when an overhead crane passed and crushed him between the lower crane girdle and the steam pipe of the hammer, causing fatal injuries.

An employee in an ice works was endeavouring to place a driving belt on a motor pulley whilst the motor was moving. He was doing so from the top of an adjoining storage house when the belt slipped and hurled him to the ground; he was picked up in an unconscious condition and removed to hospital, where he died.

An employee in a foundry was employed as a grinder on a wet stone and was cleaning dirt out of the grindstone pit when the stone burst into four pieces and one piece, weighing about 12 cwt., fell upon him. He sustained a fractured skull and died within half an hour of the accident.

An employee in a packing case factory was engaged in cleaning up the factory and when passing a running pendulum circular saw his arm came in contact with it. He received severe injuries and subsequently died at hospital while under medical treatment.

Means of Escape in Case of Fire.

Many lofty factory premises were erected during the year and many old buildings were modernised and heightened one or more stories. As a result there was constant inspectorial activity with respect to the provision of alternative means of escape in case of fire.

In those cases where plans were submitted to the Department no difficulty arose, but where this attention was not shown many problems had to be solved.

Many new external escapes were provided, but where possible, internal methods were more favoured. A large number of visits were paid by inspectors in company with the representatives of the Chief Officer of Fire Brigades, and in addition to the provision of new means of escape, the maintenance of existing escapes received due attention.

The Chief Officer of Fire Brigades rendered his usual valuable co-operation during the year, and certified that during that period 107 factories were provided with satisfactory alternative means of escape.

Prosecutions.

During the year informations for breaches of the Factories and Shops Act and Regulations were laid in 110 cases.

Following are the details :—

		Convictions.	Dismissals.	Withdrawals.	Total.
Section.					
7	Being in occupation of unregistered factory	4	.....	.....	4
20	Failing to keep premises in a cleanly state	5	.....	1	6
26	Failing to provide seating accommodation	1	1	.....	2
33	Failing to fence dangerous machinery	41	3	.....	44
38	Failing to report accidents	5	.....	.....	5
40	Employing child under 14 without special permission	2	.....	.....	2
41	Employing boy on prohibited machine	3	.....	.....	3
42	Employing female over 5 hours without meal interval	1	.....	.....	1
43	Breaches of overtime provisions	15	.....	1	16
45	Employing children under 16 without certificates	14	.....	.....	14
46	Employing between 6 p.m. and 6 a.m.	2	.....	.....	2
49	Working or permitting work in furniture factories after hours	5	.....	1	6
68	Failing to pay tea-money	1	.....	.....	1
Regulation.					
16	Failing to provide wash basins	1	.....	.....	1
23	Failing to provide suitable tools	1	.....	.....	1
(of 8/9/15).					
25	Failing to clean room containing chlorate of potash	1	.....	.....	1
(of 8/9/15).					
1	Failing to have boiler inspected	1	.....	.....	1
(of 10/3/16).					
	Total	103	4	3	110

WALTER I. TAYLOR,
Chief Inspector of Factories and Investigation Officer.

FACTORIES AND SHOPS ACT, 1912—Section 62.

BOILER REGULATIONS.

Annual Report, Period January—December, 1926.

During the year, 451 Boilers and 672 other pressure vessels were newly installed and 49 boilers and 13 pressure vessels were discarded. The number of the various types of boilers and other pressure vessels inspected is given in the following table:—

	Inspections.			Vessels.		
	First.	Re-inspections.	Total.	Discarded.	Newly Installed.	Explosions.
Boilers—						
Cast-iron, Sectional	4	37	41	2	4	.....
Colonial	103	704	807	13	103	.....
Cornish	7	118	125	1	7	.....
Egg-ended	.....	5	5	.....	.....	.....
Jackass	5	21	26	1	5	.....
Lancashire	11	78	89	.....	11	.....
Locomotive, including Portable Traction and Road Rollers	116	390	506	9	116	.....
Marine Wetback	.....	1	1	.....	.....	.....
,, Dryback	2	44	46	.....	2	.....
Multitubular	28	212	240	1	28	.....
Vertical	156	601	757	15	156	.....
Water-tubes	17	399	416	5	17	1
Wolff	.....	5	5	.....	.....	.....
Other Steam Generators	2	19	21	2	2	.....
Total	451	2,634	3,085	49	451	1
Other Pressure Vessels—						
Air and Water Receivers	249	424	673	2	249	.....
Autoclave Presses	4	16	20	.....	4	.....
Calenders, including Mangles	19	101	120	.....	19	.....
CO_2 Cylinders and Purifiers	17	186	203	1	17	.....
Coolers	.....	14	14	.....	.....	.....
Copper Coils and Pipe Heaters	5	74	79	.....	5	.....
Cylinders, Drying Drums, and Boilers (Steam Heated)	33	304	337	.....	33	.....
Desiccators	.....	3	3	.....	.....	.....
Digestors	7	84	91	.....	7	.....
Economisers	3	9	12	.....	3	.....
Hot Tables:—Presses, Drying Tables, Cantilever Presses, Patching Tables	37	211	248	4	37	.....
Jacketed Vessels	79	679	758	2	79	.....
Monteju and Crystallizers	8	18	26	.....	8	.....
Oil Receivers	3	10	13	.....	3	.....
Retorts	3	60	63	.....	3	.....
Steam-heated Rolls	.....	1	1	2	.....	.....
,, ,, Vessels	22	181	203	.....	22	.....
Steam Separators	.....	.....	.....	1	.....	.....
Sterilizers	.....	8	8	.....	.....	.....
Stills	5	19	24	.....	5	.....
Stout and Wine Butts	2	14	16	.....	2	.....
Sugar Driers	1	4	5	.....	1	.....
Superheaters	.....	.....	.....	.....	.....	.....
Vacuum Vessels	.....	13	13	.....	.....	.....
Vegetable Steamers	.....	2	2	.....	.....	.....
Vulcanizers	175	188	263	1	175	.....
Total	672	2,623	3,295	13	672	.....
Grand Total	1,123	5,257	6,380	62	1,123	1

Six thousand eight hundred and seventy-seven reports in connection with the inspection of steam boilers and other pressure vessels were lodged by accredited Inspectors, as follows :—

	Reports received.		
	Boilers.	Other Pressure Vessels.	Total.
Prescribed Reports:—			
First Inspections	451	672	1,123
Re-inspections	2,634	2,623	5,257
Total	3,085	3,295	6,380
Non-prescribed Reports:—			
Internal	497	.....	497
Grand Total	3,582	3,295	6,877

The following is a summary of notices served upon factory occupiers, to ensure compliance with the requirements of the Boiler Regulations :—

	Boilers.	Other Pressure Vessels.	Total.
Blow-off cocks	2	.....	2
Casing in lever safety valves	1	.....	1
Cocks between check-valve and boiler	2	.....	2
Direct spring loaded safety valves	14	26	40
Feed pumps	.....	.....	.....
Fusible plugs	16	.....	16
Injectors	1	.....	1
Isolating valves	8	.....	8
Pressure gauges	8	8	16
Reducing valves	2	2	4
Safety valves to be locked	21	2	23
Test cocks	5	4	9
Valve on steam connections	.....	4	4
Water gauges	3	1	4
Water Gauge-glass protectors	37	2	39
Unclassified	67	28	95
Total	187	77	264

During the year the Minister granted fifteen certificates of approval to inspect boilers and other pressure vessels. One certificate was re-issued, and one was cancelled. Two hundred and ten certificates were in force at 31st December, 1926, as per list attached hereto.

Explosions.

The following explosion was reported and investigated by a Departmental Inspector during the year ending 31st December, 1926.

A boiler attendant in a factory received burns to the arms and other injuries as a result of an explosion occurring in the furnace of a boiler.

The boiler was oil-fired, and investigation disclosed that the injured man was proceeding to light the fuel burners, which earlier had been only partially closed off, thereby permitting a slight leakage of oil into a hot furnace. Upon his return to the boiler, after being away a while, and applying a torch, the combination of gas and air fired, causing injuries to the attendant and shattering the walls on either side of the appliance.

The occurrence might easily have been attended by disastrous results, and evidences the need for the greatest care being exercised by persons in charge of oil-fired boilers.

Factories and Shops Act, 1912—*Regulations for the Inspection of Steam Boilers*, &c.

Accredited Inspectors.—31st December, 1926.

In accordance with the provisions of clause 5 of the Regulations of the 10th March, 1916, made under section 62 of the Factories and Shops Act (published in *Industrial Gazette*, vol. 9, p. 815), the Minister had, by the 31st December, 1926, approved of the persons whose names appear hereunder as persons competent to make inspections and carry out all other necessary duties pertaining to the application of such Regulations.

The names appear in groups, comprising persons resident in Sydney and Suburbs, Newcastle and district, and country centres, respectively.

Cert. No.	Name.	Address.
	Sydney and Suburbs.	
190	Adamson, D. J.	135 Auburn-rd., Auburn.
75	Allen, J. A.	"Dokotoh," Cheltenham and Beecroft roads, Cheltenham.
182	Allum, S. C.	54 Charlotte-st., Ashfield.
131	Archer, C. S.	Chaleyer-st, Rose Bay.
27	Armstrong, A. H.	Edinburgh-rd., Willoughby.
141	Arnott, J.	Belgrave-st., Manly.
34	Arnott, Wm.	9 Glover-st., Mosman.
48	Auldjo, L. C.	7 Victoria-st., Ashfield.
91	Ausburn, C. H.	39 Hawthorne-parade, Haberfield.
4	Banyard, T. R.	c/o L. Hinks & Co. Ltd., Engineers, 2 O'Connell-st., Sydney.
173	Barr, R. H.	28 O'Connell-st., City.
204	Barron, W. N.	"Narani," President-av., Brighton-le-Sands.
214	Bartlett, H. J.	c/o Department of Labour and Industry, George-st. North, Sydney.
179	Battle, A. E.	Challis House, Martin-pl., Sydney.
217	Bell, A. C.	6 Wood-st., Ashfield.
172	Bennett, G. T.	"Penryn," Sutherland-crescent, Darling Point.
84	Bennet, T. G.	Department of Labour and Industry, Sydney.
17	Bernard, T.	17 Lenore-st., Five Dock.
9	Berry, J. H.	1 Ballast Point road, Balmain.
149	Bidewell, F. T.	Bruce-st., West Kogarah.
221	Booth, H. C.	5 Dudley-st., Haberfield.
166	Brighton, E. J. B.	77 Glenmore-rd., Paddington.
43	Brown, C. J.	St. George's-crescent, Drummoyne.
126	Budrodeen, E. S.	38 Drummoyne-av., Drummoyne.
213	Campbell, A.	Russell-av., Lindfield.
105	Campbell, A. N.	23 Austenham-rd., Leichhardt.
181	Chapman, F. J.	37 Dolphin-st., Randwick.
62	Chapman, G.	Clara-st., Erskineville.
109	Christie, J.	Woodburn-rd., Lidcombe.
76	Clarkson, E. J.	"The Hut," Seaview-st., Balgowlah.
161	Coleman, J. H.	Chief Mechanical Engineer's Office, Railway Department, Redfern.
21	Connie, P.	275 Henderson-rd., Alexandria.
189	Connie, W. F.	"Elferslie," Cliff-rd., Northwood.
125	Dalby, G. W.	Australian Gaslight Co., Mortlake.
224	Danks, J. R. W.	"Rawhiti," 9 Keir-av., Hurlstone Pk.
212	Davies, A. J.	11 Foucart-st., Rozelle.
192	Davies, Wm. G.	28 Arcadia-rd., Glebe Point.
28	Davis, C. E.	50 The Avenue, Granville.
180	Davis, H. C.	29 Hayden-st., Mosman.
153	Denovan, C.	Lyons-rd., Drummoyne.
199	Dobson, A. J.	12 Tenilbra-rd., Northbridge.

Cert. No.	Name.	Address.

Sydney and Suburbs—continued.

218	Donaldson, D A. ...	20 West-st, Five Dock.
211	Donnelley, N. S. ...	42 Dening-st., Drummoyne.
135	Dowser, W. H.	96 Glenmore-rd., Paddington.
92	Duncan, J.	Queensland Insurance Co., Sydney.
53	Elder, Wm.....	6 Dalley-st., Sydney
147	Elgar, T.	Park-rd., Mascot.
133	English, W. M.	48 Cook-rd., Centennial Park.
186	Fairclough, C. S. ...	63 Booth-st., Balmain.
67	Fairweather, J.	"Shemara," 1 Day-st., Drummoyne.
202	Ferguson, W. J. ...	12 Glover-st., Paddington.
19	Fielder, J.	N.R.M.A., 39 Grosvenor-st., Sydney.
206	Fogarty, J.	90 Ben Boyd rd , Neutral Bay.
108	Foreman, D. W. ...	27 Edward-st., North Sydney.
226	Fowler, C. E.....	"Palmerston," Carnarvon-st., Auburn.
49	Fox, F. C.	661 George-st., Sydney.
50	Fraser, H.	"St. Kilda," 10 Allister-st., Cremorne.
222	Fryo, F. T.	338 Moore Park Rd., Paddington.
219	Garrow, P. M.	"Rosslyn," Alice-st., Lakemba.
63	Gitzdahl, O. L.	32 Charlcott-st., Dulwich Hill.
223	Gleeson, Michael ..	496 Darling-st., Balmain.
2	Gregory, R.	Equitable Buildings, George-street. Sydney.
61	Grosse, G. C.	29 Avona-av., Glebe Point.
124	Hall, S. G.	27 Moore-st., Lilyfield.
31	Hastie, J.	Joseph-st., Ashfield.
38	Hastie, J. N.	Department of Labour and Industry, Sydney.
157	Holroyde, J. B.	"Bayview," Sisters-crescent, Drummoyne.
52	Hopkins, E. J.	760 Botany-rd., Alexandria.
54	Horne, R.	Bent-st., North Sydney.
134	Hosking, W. J.	67 Day-st., Sydney.
29	Hunter, A. H.	Ferry-st., Hunters Hill.
205	Kennedy, J. M.	56 Kellett-st., Darlinghurst.
227	Keogh, R. J.	53 Greens-rd., Paddington.
136	Kerr, A. E. C.	c/o Miller & Co. Pty., 143 York-st. North, Sydney.
95	Kidd, H.	Cremorne Point, Cremorne.
228	Kirkealdie, W. K.	"Yallambee," Greenwich-road, Greenwich.
93	Kirkwood, D.	18 Leopold-st., Croydon.
154	Lawson, D.	30 Thompson-st., Mosman.
1	Lawson, J.	Queensland Insurance Co., Sydney.
187	Lewis, A.....	Fourth Floor, Customs House, Sydney
129	Lewis, D. M.	Kingsland-rd., Regent Park, Lidcombe.
8	Macartney, J.	96 Glassop-st., Balmain.
122	Mackie, D.	64 Pitt-st., Sydney.
151	Mackintosh, F.	Condor-st., Burwood.
191	Martin, A. E.	"Bretley," Keers-rd. and Tilba-st., Lidcombe.
193	Mason, A. B.	Department of Labour and Industry, Sydney.
22	Mason, H. D.	35 Pitt-st., Sydney.
7	Massey, G.	Post Office Chambers, Pitt-st., Sydney
39	McDonald, T. W. ...	"Durham," Rosebury-st., Mosman.
5	McLardy, J. R.	Broderick-st., Balmain.
94	McRoberts, H. A. ...	Queensland Insurance Co.
51	McSwiney, J.	Union Assurance Co., O'Connell-st., Sydney.
86	Membrey, H. A.....	Clyde Engineering Works, Clyde.
44	Mitchell, D.	66 Railway-st., Lidcombe.
10	Mitchell, S. M.	Mercantile Mutual Insurance Co., Martin-place, Sydney.
18	Moore, R. M.	Marrickville.
77	Morrison, A.	Pearson-st., Balmain.
174	Nicholls, W.	c/o R. Wildridge & Co., 76 Pitt-st., Sydney.
12	Nicoll, G.	The Crescent, Homebush.
41	Olding, A. C.	c/o Chapman & Co., Darling-street, Balmain.
68	Oliver, R. K.	Yarmouth-rd., Strathfield.
115	Orchard, A. E.	"Camilla," Beresford-rd., Strathfield.
188	Pearson, E. W.	60 Premier-st., Marrickville.
143	Petrie, N.	British Imperial Oil Co., 49 Clarence-street, Sydney.
183	Platt, W. T.	109 Pitt-st., Sydney.
40A	Pritchett, R. W. ...	56 Margaret-st., Sydney.
215	Ranch, J.....	c/o Department of Labour and Industry, George-st. North, Sydney.
67	Rawson, C.	32 Jamieson-st., Sydney.
121	Reeks, R. W.	12 Renwick-st., Drummoyne.
6	Reid, C.	Glassop-st., Balmain.
162	Reynolds, L. J.	Bull's Chambers, Martin-pl., Sydney.
137	Richardson, R.	Woodville-st., Hurstville.
42	Rodgers, S. D.	"Dalmeny," 17 York-rd., Centennial Park.
175	Russell, R.	The Avenue, Granville.
67A	Salmon, N.	84 Hunter-st., Sydney.
45	Savage, J.	36 Tweedmouth-av., Rosebery.
30	Scott, J. J.	10 Alma-st., North Sydney.
156	Scott. W.	"Balgay," Nisbett-st., North Sydney.
139	Scoular, J.	Martin-pl. (late 7 Moore-st), Sydney.
150	Shaw, T. E.	Box 1649, G.P.O., Sydney.
23	Sinclair, J.	30 Glendon-rd., Double Bay.
85	Sinclair, J.	19 Ballast Point rd., Balmain.
132	Sinclair, W.	97 Pitt-st., Sydney.
209	Smeal, K. H.	8 Hazelbank-rd., Wollstonecraft.
220	Smiles, W.	7 Iredale-av., Cremorne.
177	Smith, C. F.	Department of Works and Railways, Customs House, Sydney.
185	Smith, H. C.	"Lucerne," Cambridge-rd., Drummoyne.
171	Smith, H. D.	"Malua," Fisher's-av., Vaucluse.
89	Smith, J. M.	Peacock Point, Balmain.
208A	Smith, W. H.	"Carinya," Burns-cres., Chiswick.
111	Stephenson, W. F....	2 Hunter-st., Sydney..
194	Stevens, E. R.	183 Liverpool-rd., Ashfield.
128	Stevenson, G.	Point-rd., Northwood.
146	Stevenson, L. D. ...	East Esplanade, Manly.
58	Stobo, S. E.	Moree-st., Gordon.
88	Stowe, F. E.	54 Young-st., Sydney.
118	Stronach, J.	Ewenton-st., Balmain.
15	Tate, A. S. W.	Kelsyn Flats, Beetha-rd., Neutral Bay.
210	Taylor, C.	"Bangor," Raven-st., Gladesville.
66	Thomson, J. Sted. ..	33 Macquarie-pl., Sydney.
13	Totolos, A.	166 Princes-st., Sydney.
16	Treffone, D.	42 Bucknell-st., Newtown.
207	Turner, C.	"Wirringilla," Susan-st., Randwick.
46	Vyle, C.	14 Jones-st., Pyrmont.
178	Weeks, T. E.	"Auvergne," Parramatta - road, Haberfield.
69	Westcott, H.	Shirley-rd., Wollstonecraft.
160	Wildridge, A. H. ...	76 Pitt-street, Sydney.
14	Wildridge, R.	76 Pitt-st., Sydney.
83	Williams, A.	Department of Labour and Industry, Sydney.
159	Wilson, A.	35 York-st., Sydney.
148	Wilson, T.	Curlewis-st., Bondi.
203	Wyllie, R.	Owen-st., Bondi.

Newcastle and District.

117	Cameron, T.	11 Rowan-st., Merewether, Newcastle.
100	Clegg, W. E.	c/o Messrs. Goninan & Co., Wickham, Newcastle.
216	Darbon, W. A.	c/o Department of Labour and Industry, 73 King-st., Newcastle.
56	Dick, Jas.	20 Fitzroy-st., Mayfield, Newcastle.
74	Dick, Wm.	Fern-st., Islington, Newcastle.
104	Ellis, R. G.	Kerr-st., Mayfield, Newcastle.
165	Fulton, Wm.	25 William-st., Tighe's Hill, Newcastle
200	Gray, T. G.	"The Billows," Carlisle-st., Stockton, N.S.W.
31A	Lowrie, J. A.	Broken Hill Propty. Co., Newcastle.
127	McIntyre, J. P.	Robert-st., Mayfield, Newcastle.
208	Miller, A. H.	76 Church-st., Newcastle.
145	Miller, W. A.	Dredge "Morpeth," Newcastle.
120	Moore, W. E.	Smith-st., Newcastle.
87	Morrison, D. N. ...	Carrington, Newcastle.
113	Nairn, A. C.	Castlemaine Brewery, Hamilton, Newcastle.
11	Rodgers, J. E.	Church-st. West, Newcastle.
73	Taylor, A.	19 Hudson-st., Hamilton, Newcastle.
47	Webb, H. J.	c/o Messrs. Morison and Bearby Ltd., Carrington, Newcastle.

Cert. No.	Name.	Address.
	Country Districts.	
	North.	
98	Ratcliffe, J. R.	Rouchel-rd., Aberdeen.
123	Paul, J. B.	Post Office, Armidale.
198	Wearne, Wm.	Emmaville
158	Craig, H.	Inverell Foundry.
106	Sargeant, J. W.	Shiro Hall, Merriwa.
81	Vidler, H. E.	Hill-st., Scone.
170	Sheppard, J.	High-st., Tenterfield.
168	Gaukroger, F.	Tingha.
	North Coast.	
102	Wood, E. H.	Crane-st., Ballina.
78	Issacs, A. R.	c/o Colonial Sugar Refining Co., Ltd., Broadwater, Richmond River.
71	Smith, E. W.	Coff's Harbour Jetty.
59	Mathows, T. B.	c/o Colonial Sugar Refining Co. Ltd., Condong, Tweed River.
110	Gibson, T.	Glenreagh.
114	Frewin, F. A.	31 Prince-street, Grafton.
72	Oag, J.	Harwood, Clarence River.
184	Wilson, J. A.	Harwood, Clarence River.
152	Cliff, R. C.	c/o Kempsoy Electric Light and Power Supply Co. Ltd.
40	Boa, A.	Elliott-rd., Lismore.
57	Guthrie, A.	Clay's Laundry, Lismore.
151	Miller, G.	Pulganbar, *via* Copmanhurst.
65	Woodley, E. H.	Victoria-st., Taree.
	South.	
33	Coutts, H. K.	Town Hall, Goulburn.
225	Pain, E. O.	Taralga-rd., Bradfordville, via Goulburn.
70	Hargreaves, R. S.	Keira, Cootamundra.
	South Coast.	
80	Laing, T.	North Araluen.
90	Parson, H. W.	North Araluen.
82	Harrison, G.	Kinghorn-st., Nowra.
35	Jones, S. C.	c/o Electrolytic Refining Co. Ltd., Port Kembla.
103	Sharp, J. W.	Keira-st., Wollongong.
	West.	
164	Giffin, J.	Proprietary Mine, Broken Hill.
169	McAskill, A. W.	Junction Mine, Broken Hill.
201	Reece, T. A.	Electric Light Works, Broken Hill.
142	Triggs, A. J.	Box 11, Post Office, Broken Hill.
163	Woolcock, H. A.	325 William-st., Broken Hill.
107	Allibon, H.	Deniliquin.
197	Clark, J. C. B.	15 Hayley-st., Lithgow.
26	Parker, E.	Hassam's Wall rd , Lithgow.
138	Donovan, D.	Commercial Hotel, Nyngan.
32	Smith, T. F.	Court-st., West Wyalong.
140	Noble, J. O.	Second-av., Wentworthville.

The following companies have on their respective staffs persons holding the Minister's certificate of approval to inspect boilers, &c., under the Boiler Inspection Regulations :—

Atlas Assurance Co. Ltd., Sydney.
Australian Alliance Assurance Co., Sydney.
Australian Mutual Fire Insurance Society Ltd., Sydney.
British Equitable Assurance Co. Ltd., Sydney.
City Mutual Insurance Co. Ltd.
Colonial Mutual Fire Insurance Co. Ltd., Sydney.
Commercial Union Assurance Co., Sydney.
Co-operative Insurance Co. of Australia Ltd., Sydney.
Eagle, Star, and British Dominions Insurance Co. Ltd., Sydney.
Employers' Liability Assurance Corporation Ltd., Sydney.
Farmers' and Settlers' Co-op. Insurance Co. of Australia Ltd.
Federal Insurance Co. Ltd., Sydney.
Insurance Office of Australia Ltd., Sydney
Liverpool and London and Globo Insurance Co. Ltd., Sydney.
London Guarantee and Accident Co. Ltd., Sydney.
London and Lancashire Fire Insurance Co. Ltd., Sydney.
Manufacturers' Mutual Accident Assurance Assn. Ltd., Sydney.
Mercantile Mutual Fire Insurance Co. Ltd., Sydney.
New Zealand Insurance Co. Ltd., Sydney.
North British and Mercantile Insurance Co. Ltd., Sydney.
Phoenix Assurance Co. Ltd.
Queensland Insurance Co., Sydney.
Royal Exchange Insurance, Sydney.
Royal Insurance Co. Ltd., Sydney.
Southern Insurance Association Ltd., Sydney.
Standard Fire and Marino Insurance Co. of New Zealand Ltd.
Sydney Fire Office Ltd., Sydney.
The South British Insurance Co. Ltd., Sydney.
Union Assurance Society Ltd., Sydney.
Union Marine Insurance Co. Ltd., Sydney.
United Insurance Co., Ltd. Sydney.

Mr. Superintending Inspector Armitage reports :—

During the year, as outside Superintending Inspector, I paid special attention to the guarding of machinery and ventilation in the districts of the Metropolitan Inspectors, and also included Wollongong and Port Kembla.

The factories concerned were mostly textile, and those with wood working plants, and the large metal and ore refining plants of Port Kembla.

The hydro-extractors used in factories other than laundries have been brought into line with the order of the Court, *i.e.*, that hoods have been provided and also interlocking safety devices which prevent the hood being raised while the basket is in motion.

In some of the large hat mills and textile factories where the hydro is electrically driven, and in others where direct steam power is applied, the above provision has been overcome by some ingenious contrivances, which bring these into line with similar machinery guards of other parts of the world. The large calenders in laundries are also further protected by substantial guards, at the sides and backs of the rollers. Some of the textile mills have received special attention as to ventilation and the means of reducing humidity. In one large mill it was found that recent building extensions had blocked out all natural ventilation provided for in the original design. This was overcome in a satisfactory manner.

At Port Kembla, where copper wire is drawn, the large, hot rollers gave off fumes from the melting fat, &c., used in the process, which were objectionable. For some time complaints had been made, and I persuaded the management to provide large hoods and flues that seem to have overcome the difficulty and given satisfaction.

In the same works some of the underground pits, where the stokers worked, were provided with extra natural ventilation, which seems to have been of great benefit to the men.

The wood working machinery received special attention, as in previous years, in the guarding of such dangerous machines as circular saws, jointers, and spindle-moulders.

As a rule manufacturers co-operated and were inclined in every way to meet the wishes of the Department and to bring about efficient protection of their employees.

Mr. Senior Inspector Dunleavy reports :—

During the year I was acting in the capacity of a Superintending Inspector, and as a consequence spent a portion of my time in the office carrying out the duties appertaining to that position.

At the same time I kept my district under supervision, and with the assistance of the country officers during their sojourn in the metropolitan area, I was able to have the whole of the factories in my area visited.

Registrations.—A number of new factories were registered in my district during the year.

Sanitation and Hygienic Conditions.—This important phase of factory work received my special attention, and I am pleased to state that factory occupiers are giving this matter more attention every year.

Accidents.—I am pleased to report that no fatal accident occurred in my district during the year. A number of minor accidents occurred, a few of them being caused through youths working at power presses without affixing the guards.

Bakehouses.—Constant supervision is still necessary in the bakehouses, as a number of occupiers are prone to neglect to limewash as frequently as is necessary to keep the bakehouses in a satisfactory condition.

Certificates of Fitness.—A few occupiers in my district had to be given notices to obtain certificates of fitness for persons under 16 years of age.

Fire Escapes.—Constant vigilance on the part of the inspector is required in connection with fire escapes, particularly outside iron escapes in the city area, which are subject to corrosion owing to the action of the weather. In some instances occupiers were given instructions to repair, and paint their fire escapes.

Fencing of Machinery.—A large number of occupiers were given instructions to securely fence dangerous machinery, and, in some instances, where they neglected to carry out instructions, proceedings were taken against them in the Court, and fines inflicted.

Boiler Inspections.—A few cases came under my notice where occupiers had neglected to have their boilers tested, and, in all cases, when their attention was drawn in the matter, they complied with my instructions.

Mr. Inspector T. Gordon Bennet reports :—

Registrations.—There were many applications for the registration of various classes of premises, all of which were inspected prior to any recommendation being made that a certificate should issue. In two instances registration was refused till certain material alterations were effected.

Fencing and Guarding of Machinery.—For the first six months of the year I was engaged in the same district as in the preceding year. Briefly put, a goodly portion of my time was occupied in what might be termed developmental work, that is following up the foundations laid in the year preceding. It was most interesting and encouraging to watch the new work progress and develop; the old giving place to the new. The replacement of ill-lighted, badly ventilated premises by those which are bright, clean and cheerful, also unsafe machines being equipped with modern safeguards, amply displayed the benefits possible under the Act.

During the second half of the year I supervised that district known as the Near West, embracing the area from Doonside to Bathurst, Wallerawang to Coonabarrabran, Merrygoen to Dubbo and Dubbo to Coonamble. The large industrial centres of Lithgow, Kandos and Portland commanded the major portion of my time by reason of the large secondary industries situated therein, such as the steel works and blast furnace and cement works. In the above I made a detailed inspection of the works in company with a responsible technical officer of the firm concerned so that on the completion of the inspection the Departmental requirements were thoroughly understood and disputed points settled.

I visited the cement works at Kandos, where a Safety Council had been formed as referred to in my 1925 report. At the conclusion of a close survey with the Chief Engineer, I could not do other than express the greatest satisfaction at the achievements of the company in conjunction with the Safety Council. The works had assumed a different aspect to that of twelve months previously and there was abundant evidence of the valuable safety work done. The company informed me that the work carried out as the result of my previous inspections had cost a very large sum, in addition to which they had expended a further large sum as the result of the recommendations of the Safety Council. For the first year's work the accident rate was reduced 43 per cent. A prominent Union official remarked in conversation, "All the fighting in the Courts could not produce such satisfactory conditions as now obtain." Following upon my inspection of the steel works referred to I addressed an attentive gathering of employees on the "Principles of Safety First in Industry."

Accidents.—It is gratifying to report that no accident of a major character occurred during the year.

Bakehouses.—Close attention was given this type of factory both in the city and the country, and any directions given were rigorously enforced. In one instance the premises were condemned outright and a complete new bakehouse is to be built in its stead.

Fire Escapes.—Considerable difficulty was experienced in two instances, but after conferences with the owner, his architect, and the inspector of the Fire Brigades a satisfactory solution was arrived at in each instance.

The Royal Agricultural Show.—Prior to the regular Easter show some time was spent in advising exhibitors of the Departmental attitude with respect to the dangers to the visiting public from moving machinery exhibits, with satisfactory results.

Conclusion.—As a result of the year's work some advancement has been achieved in factory conditions for the worker, also in co-operation between the employer, employee, and the Department.

Mr. Inspector Crozier reports:—

At the beginning of the year under review, I was appointed to the charge of a section of the Metropolitan District.

Included therein, are the areas contiguous to the Sydney Underground Railway and Harbour Bridge site, and resumptions, and the demolition of properties on the areas resulted in frequent changes in the occupancy of factories.

Registrations.—During the year approximately 145 factories were registered in my district; the majority of the premises having been previously occupied for factory purposes.

The registrations of approximately 140 factories were cancelled, following the termination of, or change in, occupancy of premises.

Structural Conditions.—The requirements of the Act have been complied with, in such new buildings as have been erected, in the area under my supervision, during the period under review.

The general design, construction, and accommodation of one large building, completed and occupied early in the year, exemplifies the gratifying upward trend in the standard of factory premises.

Sanitation.—The closest attention has been given to the provision of this section of the Act, and where necessary improved lighting and ventilation have been obtained.

A sustained effort has been made to secure the co-operation of employees to secure the maintenance of sanitary accommodation in a satisfactory condition.

Ventilation.—The means, available for ventilating workshops have been constantly observed, and in such cases as appeared necessary, instructions were given to provide additional means of ventilation.

Where mechanical systems for inducing air movement, or dust exhaust, were in operation, the efficiency of same were investigated, and improvement obtained when defects were found.

Fencing and Guarding of Machinery.—The provision of efficient fences and guards on power transmission gear and machinery, and the effective maintenance of same, have been consistantly insisted upon, and improvements generally secured, where the safeguards provided were below a reasonable standard.

An unsatisfactorily large number of defective abrasive wheel guards were inspected, and it became evident that many of the users of these tools were ignorant of the magnitude of the stresses set up, and the serious hazard involved by careless and improper running and use of such wheels.

Explanations indicating the safe practice to be adopted almost invariably resulted in co-operation in the desired direction.

Accidents.—During the year, the causations of accidents (reported under Section 38) resulting in injuries to employees in factories, were carefully investigated.

Hand injuries comprised the greater portion of those dealt with.

In two instances persons working at meat mincing machines suffered serious injury, each of them having a hand mutilated as the result of contact with the revolving feed worm.

The failure of a new 14 inch diameter abrasive wheel, occasioned apparently by whirling it at a peripheral speed in excess of the limit specified, resulted in injuries varying in severity, to three men, who were standing in the vicinity of the wheel at the time.

Two explosions in factories claimed my attention early in the year. The first was caused by the accidental ignition of methylated spirit.

A youth was mixing shellac in a small saucepan, in close proximity to a four gallon tin partially filled with methylated spirits. The tin was enclosed with the exception of a small pouring hole roughly 1 inch in diameter. The atmospheric temperature at the time of the accident was in excess of 90° Fah.

Inquiry disclosed that the youth lit a match for some purpose, and investigation suggested that the flame from the match ignited the inflammable material in the saucepan, which then ignited the vapour given off from the free surface of the spirits in the large tin, causing a small explosion and fire which fatally injured the youth.

To reduce the accumulation and escape of vapour, and minimise the risk of accident attending the use of low flash point liquids, I made available to the occupier a sample inflammable liquid safety container, brought under my notice by Mr. Inspector Middlemiss.

The occupier had several containers made, similar to the pattern submitted, to replace the ordinary tins previously used.

The second explosion occurred in a bakehouse, in which an oven, with oil fuel heating system, had just previously been installed. A slight leakage of oil from an unlighted burner accumulated at the oven bottom; a lighting torch inserted in oven to light the burner, ignited the oil vapour present, and the explosion which followed, blew back through the oven doors, burning two men about their faces and arms. Had the precaution been taken, to freely circulate air through the oven, before applying the torch, in all probability this accident would not have occurred. The whole plant was throughly examined, and necessary alterations were indicated to bring it in conformity with safe practice.

Fire Escapes.—The number of new fire escapes completed totalled 7. Several other escape requirements were brought under the notice of the Chief Officer of Fire Brigades, and alterations and improvements effected in accordance with his directions. The new escapes erected, included two first class external steel structures.

The general condition and maintenance of escapes inspected were, in the main, satisfactory.

Bakehouses.—The inspection of bakehouses showed that fairly good conditions had been maintained. The sanitary conditions in connection with this class of factory have been particularly supervised.

Certificates of Fitness.—The observance of this section of the Act has been satisfactory.

Overtime.—Only a very limited amount of overtime, within the limitation of section 43, was worked by boys during the year.

General.—The growing tendency to adopt liquid fuel for commercial purposes and processes, is worthy of note. Several factories in my area have installed complete plants, and at least three companies are specialising in the manufacture and installation of liquid fuel plants and apparatus.

This developement may be attended with certain added hazards, which, however, can be controlled by the exercise of safe practice. The increasing use of this type of fuel in industry, by operatives not necessarily versed in the possibilities of danger associated therewith, further impresses the appreciated necessity for specific regulations to promote safety.

Mr. Inspector Davis reports :—

Registrations.—No new industries were registered in this district, although several changes in ownership of established industries were effected, and the usual custom was followed in such changes of insisting upon provision of the most modern conditions.

Structural Alterations.—Factory premises, generally, were in fairly good order, but there is still much to be accomplished before some buildings used for factory purposes can be considered thoroughly satisfactory.

Sanitation.—In several instances it was found necessary to issue instructions for the thorough cleansing of factories. Where the sewerage system is in operation little trouble was met with regarding lavatory accommodation, but in some suburbs, where the pan system is in use, orders were frequently given to provide an adequate supply of disinfectant.

Fencing of Machinery.—Continued efforts of inspectors in regard to the safeguarding of machinery have generally had the desired effect of raising the standard of safety. These efforts have been materially assisted by the introduction into many of our factories of modern machinery, fitted and provided with the latest types of safety devices. Constant vigilance, however, was found necessary to ensure that fencing was properly maintained in an efficient state.

Fire Escapes.—It was found necessary in several instances to review means of escape which, when first provided, were considered efficient. The result of the reviews was that, in almost all instances, alterations and additions were required and secured.

Overtime.—Notices of having worked overtime were given in a few instances, and it was found that the overtime worked was considerably less than usual. Tea money and overtime payments were made and recorded as prescribed.

Bakehouses.—Except that the usual notices to limewash had to be served on a number of occupiers, the majority of bakehouses were kept in a satisfactory condition.

Accidents.—A number of accidents occurred during the year, one of which, unfortunately, had fatal results.

A pulley keyed in the ordinary manner and fitted near the end of a shaft revolving about 8 feet from the ground, became loose and working off the end of the shaft fell to the floor where it broke into several pieces. One of these, about 12 lb. in weight, struck a workman on the head inflicting fatal injuries. I formed the opinion that the key had, unnoticed, worked loose, and that the pulley was drawn from the shafting by the spring of the belt. The Coroner found that the injuries were accidentally received.

Certificates of Fitness.—Some occupiers are still very careless with respect to obtaining the necessary certificates for boys under 16 years of age, and it was necessary to issue instructions in several cases.

Boilers.—Careful attention was given to this phase of our work, and I found that occupiers were observing the regulations satisfactorily.

General.—Throughout the year I found employers quite willing to carry out any suggestions made for the safeguarding of machinery. Several occupiers replaced the old type of machine guard with more modern safety devices. An operator must attain better results when all elements of danger have been eliminated because his mind can then become concentrated solely upon his work.

Inspector Dunwoodie (Newcastle) reports :—

I was transferred from the metropolitan area to Newcastle early in February, relieving inspector Mr. Armstrong, who returned to Head Office.

Registrations.—These were confined mainly to change of occupiers and were fairly numerous. Several new registrations were effected, principally small businesses in the engineering line. Two new factories were built, and it is pleasing to note that both mark a distinct improvement, and tendency towards the departmental standard.

Structural Conditions, Sanitation, &c.—A certain amount of difficulty was experienced in this direction owing to long-established businesses being domiciled in old premises. Occupiers generally are beginning to realise that successful business operations are closely allied to modern factories, plant and equipment, and ultimate benefits may be anticipated along these lines. Frequent enquiries are made from the Department, an attitude always encouraged. Instructions to remedy defects have been promptly complied with.

Fencing and Guarding of Machinery, Accidents, &c.—It is a pleasing feature to note the gradual recognition by the employee equally with the employer, of the dangers in this direction, resulting in more concerted action towards their elimination. This attitude, unfortunately, is not yet as general as desired, and is more evident in small establishments and country districts. Ignorance of suitable devices, and their application to general conditions, are important features in this respect, together with an evident

disregard of the element of danger, often entailing needless risk. It is becoming more generally acknowledged that mutilation is also bad business practice, probably the recent application of the Workers' Compensation Act has been a considerable factor in this direction, resulting in some cases in the formation of a safety first organisation. This is particularly pleasing and desirable from an inspectorial point of view and constantly encouraged as most productive of future good. The more general application of stanchions, tubular rails and mesh wire fencing, of substantial design and construction, is a pleasing feature, often replacing temporary, unsightly and inadequate structures. Two fatal accidents came under notice during the year, one caused by the partial collapse of a building in course of construction, during a gale, the other occurred through the load on a travelling crane striking and jambing a workman against the job he was engaged on. It is reasonable to believe that co-operation and the practical application of a safety first organisation may have averted this accident. Such an organisation is now in operation with this firm. Two accidents showing negligence on the part of the employer were immediately followed by prosecution and conviction. Very few other accidents occurred during the year, mostly of a minor character, and in two cases were directly attributable to carelessness on the part of the employee.

Boilers.—The requirements in this respect have been fairly well maintained and do not necessitate lengthy comment. Instructions served were readily complied with.

Bakehouses.—Many bakehouses labour under the disability previously set out under the heading of structural conditions, &c. Some occupiers have recognised this to such an extent that new premises are being built and others under consideration with that object in view. Plans are frequently submitted to the Department for approval and advice before commencing building operations, a procedure usually productive of beneficial results. The standard of cleanliness, &c., has been reasonably satisfactory, and instructions, when necessary, were promptly carried out.

Fire Escapes.—Occasion only once arose to seek the co-operation of the Officer-in-Charge of the Fire Brigades, the result being satisfactory.

Certificate of Fitness.—It was frequently found necessary to serve instructions in this respect, the requirements, apparently, not being fully recognised in most cases by the occupier.

Overtime.—This was not a pronounced feature during the year except in some of the clothing trades, occasioned by Christmas orders, and in one case, a laundry, through rush of shipping orders.

General.—Industrial conditions during the year necessitated considerable activity, and together with the large field to cover, occasioned constant care and attention.

Mr. Inspector Durack reports :—

During the year under review my factory district included the following areas, viz. :—Enmore, Glebe, Lewisham, Newtown, Petersham, Pyrmont, and Summer Hill, together with the outlying townships of Blacktown, Pitt Town, Richmond, Riverstone, and Windsor. This district was altered towards the end of the year by taking off Glebe and part of the Ultimo areas. This alteration was necessitated by the fact of a good deal of my time being taken up with investigations and supervision of the private employment agencies in the metropolitan area, and a few outlying towns, and also with industrial prosecutions conducted by me for all the female inspectors at the City Court of the Chief Industrial Magistrate.

Registrations.—During the year a large number of factories were registered, chiefly in the motor body building industry, some of them employing only a few persons, whilst a number are working on a large scale, and employing from twenty to seventy persons.

One factory can be particularly referred to. These people carried on a large condiment manufacturing business adjacent to the city, but finding their premises too small for the increasing industry built a large factory in another suburb, where they now employ eighty persons. This factory is splendidly equipped with the latest types of machines, modern dining rooms, and together with the latest lavatory accommodation for both sexes; in fact, everything has been done in accordance with the requirements of the Act, and so well done that the building can be compared favourably with any of its class in or around Sydney.

Fencing of Machinery.—The fencing and guarding of machinery demands the continual supervision of the inspector, particularly so with a number of occupiers who are inclined to be thoughtless of their obligations under the Act. Wherever it was necessary to give direction they were invariably carried out.

Sanitation.—The requirements of the Act under this section had my constant attention during the year, particularly in the five outlying towns, where there is no sewerage system. I had on many occasions to insist on having every closet regularly lime-washed and doors, &c., kept in good repair, and to see in all cases, especially where food was prepared that these conveniences should be at a satisfactory distance from the factory.

Accidents.—There was only one serious accident in my district during the year. This happened at a circular moulder. The operative was working on an oval piece of wood, when in some manner it "kicked," bringing his hand on to the knives and lacerating four fingers so badly that they had to be amputated.

The occupier was prosecuted for his failure to provide a proper guard for the machine. The case was hotly contested, a barrister and solicitor appearing for the defence, whilst the Department depended on the inspector. The evidence on the side of the occupier was to the effect that the ring "guide" was a sufficient guard for this machine, whilst the evidence for the Department was that it was not, and several guards were produced to show that the machine could be securely guarded. After the magistrate had viewed the guards on a similar machine in another factory, he forthwith convicted and fined the occupier. The employee also received £350 10s. compensation.

Fire Escapes.—I made several inspections of fire escapes, mostly in company with an officer of the Metropolitan Fire Brigades, and I am pleased to report that the means of escape in case of fire was satisfactory in every instance.

Bakehouses.—The condition of bakehouses visited can be classed as satisfactory. Instructions in a few instances were given with regard to repairs and alterations, which on a future visit were found to have been satisfactorily attended to. Lime-washing at regular intervals was insisted on, and in every case I found this had been done in a satisfactory manner.

Overtime.—Practically little or no overtime was worked during the year.

Certificates of Fitness.—Several occupiers were warned of their obligations under this section, and it was insisted on that all persons under 16 years of age should procure a certificate from the Department.

General.—On the whole, I found that occupiers and persons in charge of factories were giving better attention to the safety and welfare of their employees, and that there is a very noticeable change for the better in sanitary matters, and that proper precautions were being taken to avoid accidents in every factory in this district.

Inspector Henstock reports:—

Registrations.—During the year many new registrations were completed in my district, also additional registrations by change of occupier.

Other factories of importance were a modern flour mill at Merrylands, also a joinery and saw mill. In my city area several new buildings were erected and registered for factory purposes, comprising printing, motor engineering, and clothing trades.

Structural Alterations.—Extensive alterations and additions continue to be made to city factories to conform with the requirements of the Act and to meet extension of business. I found ready co-operation with architects, and a desire by factory owners to take advantage of modern improvements, by way of ventilating and better designs of windows, with a view to air circulation and a more constant air change. In several city factories advantage has been taken during alterations to provide some excellent accommodation for purposes of recreation, and partaking of meals, on the roofs of the buildings.

Sanitation.—A fairly good standard has been maintained in this direction. One large engineering firm in an outside suburb has completed installation of a septic tank at the factory, giving much needed improvement from the pan system. In other factories improvements have been made, and I have received valuable assistance from local health inspectors in this work.

Fencing of Machinery.—Observance of the requirements of the Act has been general and fairly satisfactory. The type of guards continues to improve, and makers of machines are now giving closer attention to the designing of efficient guards and are making them an integral part of machine; this applies, in particular, to wood-working machinery.

Accidents.—Reported accidents received careful attention; the majority being of a minor character. No fatality occurred in the district.

Fire Escapes.—During the year a number of fire escapes were erected, also extensions owing to additional floors being built to existing factory premises. Close attention has to be given to approaches, and notices had to be served to maintain clear passage ways.

Bakehouses.—Bakehouses generally were kept in cleanly condition, and lime-washing attended to, and where instructions were given they were promptly carried out. New bakehouses were built in Lidcombe, Auburn, and Granville, also several extensions and improvements to city premises.

Certificates of Fitness.—Instructions had to be issued to several occupiers, owing generally to their having had no previous factory experience; in other cases the boys failed to obtain the certificate from previous employers.

Mr. Inspector MacCubbin reports:—

During the year I was in charge of No. 12 district which contains a large number of important factories requiring constant supervision to ensure that the provisions of the Act are observed.

Registrations.—A number of new factories were registered in my district and some were cancelled through change of occupiers.

Hygienic Conditions.—I gave special attention to this phase of factory work and I am pleased to say that vast improvements were made. In most of the new factories provision was made for up-to-date sanitary conveniences, and many improvements were effected in old established places.

Fencing Machinery.—The usual care was given to this important work. The installation of new machines gave opportunities to make improvements with respect to fences and guards. The use of electricity as a driving power provides means of getting a direct drive to the machine by the use of motors. With the elimination of extra mill gearing there is a corresponding reduction in the risk of accident.

During the year I sat on the Departmental Machinery Committee, and assisted in devising, and experimenting with new guards.

Accidents.—Two fatal accidents occurred in my district during the year. In one case a youth was operating a sand sifting machine, electrically driven. The machine was connected to a main switch on the wall by means of a "cab-tyre" flex about 30 feet long. The youth in shifting the machine failed to switch off the current at the main wall switch, and in pulling out the flex from the machine the live terminals came in contact with his hand. He received a severe shock and fell backwards striking his head on a piece of iron with fatal results. After investigation I suggested the fitting of a new type of plug connection to the flex and of two red pilot lights near the main switch, connected in series to indicate whether the current was on or off. The suggestion was adopted introducing a higher degree of safety.

In the second case a workman was crushed by a body pattern weighing 15 cwt. being lowered upon him without it being known that he was beneath it. He was engaged in ramming a socket for a large cast iron pipe and it was thought that he had left the pit. The body pattern was oiled, lowered by an electric crane into the casing so that the remainder of the ramming could be completed. Before it was lowered a warning call was given, but later the workman was found badly injured and later died. I made suggestions which included the provision of electric light being placed at the top of the casing with a control switch near the pit, which would enable the socket rammer to switch on a red light when he was doing this class of work. The suggestion was adopted with satisfactory results.

Several other accidents happening at machinery were reported and were carefully investigated. One occurred at a spindle moulder, the workman losing part of his left hand. The machine was not guarded at the time, although the occupier had previously been notified that a guard must be affixed, and had indeed informed the Department that the instructions had been carried out. As the result of litigation which followed the workman was awarded £2,000 in compensation.

Bakehouses.—Constant attention was given to bakehouses, and numerous instructions to lime-wash were issued. In several cases I had to give instructions to fence the machinery in use.

Certificates of Fitness.—In a few instances the attention of occupiers had to be directed to this section of the Act.

Fire Escapes.—A number of fire escapes were approved by the Chief Officer of Fire Brigades, and proper upkeep of existing escapes maintained. Strict attention was given to keeping all entrances to escapes clear, and notices were required to be exhibited clearly directing the way to such escapes.

Boiler Regulations.—Occupiers, generally, complied with the requirements but occasionally attention had to be drawn to the proper exhibition and renewal of certificates.

General.—The standard of factories is on the up grade and much is being done by many occupiers to still further improve the working conditions of their employees.

Mr. Inspector Middlemiss reports :—

Registration and Structural Conditions.—A large number of registrations were dealt with during the year. The building of a large six storey motor body factory was commenced, and it is expected that on completion this will be the most modern building and plant of the kind in the State. The plans provide for a high standard of natural ventilation and lighting, and also for excellent lay-out of plant. Good provision is made for fire prevention and also adequate means of escape in case of fire. The structure is fire resisting throughout. Concrete stairways enclosed in brick walls are located at each end of the building, with access provided to each, from all floors through fireproof doors. Water sprinklers are fitted throughout the factory.

Large additions have been completed during the year to one of the largest textile factories, and it is satisfactory to find provision made for higher standards of comfort and safety than heretofore. Both natural and artificial lighting are excellent.

The standard of factory buildings, especially where new premises are built to house particular industries steadily improves, and this is increasingly evident where architects and builders have specialised in factory structures, and have also taken advantage of the co-operation of Departmental officers.

It is considered that the Amending Factories and Shops Act will provide remedies for many of the difficulties referred to in previous reports.

Sanitation and Hygiene.—The provisions of the statutory sanitary accommodation were found to be fairly satisfactory, but the condition of some of the accommodation calls for criticism. I have found that a Shop Committee can very often deal most efficiently with persons who fail to consider the comfort of fellow employees.

It is hoped that the provisions of the Amending Factories and Shops Act will enable more definite action to be taken to remedy adverse conditions due to known health hazards in a number of trade processes.

I found in a number of cases that mechanical fume and dust exhaust systems were ineffective. As stressed in previous reports it is, in my opinion, urgently necessary that minimum acceptable standards should be specified by regulations, and means provided for regular inspection and testing of all such mechanism or conditions where non-compliance with any specified standard would prejudice the health or well-being of operatives in the factory.

Accident Prevention.—No fatal accidents occurred in my district during the year. Careful study and attention were given to the many problems of fencing and guarding machinery. I was successful in securing the co-operation of the largest manufacturers of power presses in the State, and as a result a new and improved type of guard for these machines was produced by the firm as a standard departmentally approved as fitting to their machines. Unguarded power presses are amongst the most dangerous machines in use and it is hoped that the use of a device mentioned may help to reduce accidents at these machines.

Co-operation with another machine manufacturer resulted in an improved type of approved spindle moulder guard being placed on the market.

I was also successful in evolving a new type of interlocking guard applicable to an electrically driven hydro-extractor. The cover guard over the basket was designed to interlock with a press button type of operating switch.

As stated in previous reports investigation of a number of accidents disclosed that a large percentage were due to " bad practice," and lack of training and supervision of youthful employees. I found that in a number of cases accidents were directly due to the removal of or failure to correctly adjust safeguards provided.

It is considered that some measure of responsibility should be placed upon employees who, against specific instructions, remove or fail to use the safeguards supplied.

Most of the accidents investigated occurred at the point of operation of the machines, though in one case a man lost his hand by inadvertently placing it in contact with overhead shafting located more than 6 feet above the floor upon which he was standing. The shafting was 2 inches in diameter and the man's hand was caught on a projecting end which could, and should, have been securely guarded. The occupier was fined for failing to securely fence the shafting.

Several other firms were prosecuted and fined for failing to securely fence and guard machinery. I would again stress that, in my opinion, work in accident prevention, and for the elimination of industrial dangers to health could be best assisted by more extensive Departmental publicity in the form of bulletins, giving specific and well illustrated information in clear terms to the general public, and by a wider publication and enforcement of legalised standards.

Bakehouses.—These were found generally in fairly good condition. Additional natural ventilation was ordered in a number of cases.

Overtime.—No breach of section 43 came under my notice during the year.

General.—Towards the end of the year I was engaged for some time upon special work for the Chief Inspector.

In spite of the increasing complexities due to the development of industry and new processes, there is, in my opinion, no doubt that working conditions in factories consistently improve. It is believed that the rate of progression will be best accelerated by effective educational publicity and co-operation.

Mr. Inspector Nolan reports :—

On the 30th June, 1926, I completed a term of eight and a half years in the Western district, and following on a request, was transferred to the Metropolitan district. On the 1st July, 1926, I was allotted districts which included an area in the southern portion of the city and the Eastern Suburbs.

Registration.—A large number of applications for registration were dealt with during the year, and precautions were taken to see that the provisions of the Act and Regulations were complied with, and where necessary directions were issued with respect to ventilation, means of escape in case of fire, and the cleanliness of the premises, &c. Two applications for registration were rejected owing to the premises not being suitable for factory purposes.

Structural Alterations.—A number of directions were issued under this heading, but no difficulty was experienced in having necessary alterations carried out.

Sanitation.—The sanitary conditions of the factories visited were found to be satisfactory, particularly in factories where large numbers of persons are employed. In several new factories special consideration was given to sanitary conveniences, and the steps taken indicate that occupiers are giving more attention to the comfort of the employees. The improvement can be illustrated by referring to certain laundry premises which were remodelled, the sanitary arrangements in the new place being of an ideal type.

Fencing and Guarding of Machinery.—Matters under this heading received the usual constant supervision. At each factory visited where mechanical power was used steps were taken to see that suitable guards were provided and maintained in an efficient manner.

The adoption of " Safety First " principles receives greater recognition each year with excellent results. At one factory where a number of power presses and other dangerous machines are used, the works manager, who is a " safety first " enthusiast, proudly related that not one serious accident occurred in his factory during the past twelve months. This result is commendable when one recalls that some years ago the same factory held a bad record with respect to factory accidents. This works manager, like many others, is ever ready to co-operate with the factory inspector regarding safety devices, and always keeps a watchful eye upon his plant to see that guards and fences are properly maintained.

Experience indicates that it is the small factory where the guarding of machinery is neglected. In one such place an accident befel a lad when using a mincing machine. This factory had not been registered. If the occupier had applied for registration in the usual manner, instructions would have been issued to provide for the proper guarding of the machine in question. The accident was followed by proceedings being taken against the occupier for being in occupation of unregistered premises, and also for not having the machine securely fenced. He was convicted and fined with respect to both offences.

At another factory directions had been issued respecting the fencing of a belt and pulley, which were in a dangerous position. As the instructions had not been complied with, proceedings were taken and led to conviction and the imposition of a penalty.

I desire to again direct attention to the helpful practice of the Department in issuing printed pamphlets illustrating approved guards of various types. The free distribution of the pamphlets have greatly assisted in securing a better standard of guarding dangerous machines, and are appreciated by occupiers.

Fire Escapes.—In factories where fire escapes were necessary the co-operation of the Fire Brigades Department was secured and the necessary action taken to provide for approved means of escape in case of fire.

Overtime.—A number of notifications were forwarded to the Department setting out the reasons for overtime being worked, and subsequent investigations disclosed that such work was necessary, principally through exigencies of trade.

Bakehouses.—A good standard respecting cleanliness, &c., was maintained during the year. A number of instructions were issued to lime-wash walls, &c., and also to provide hoods to carry off to the outer air smoke and steam.

A number of bakers now use a power-driven dough mixing machine of a small type, and it is a big improvement on the old method of mixing dough by hand, being much cleaner and faster.

Certificates of Fitness.—At all factories where juveniles were employed investigations were made to ensure that the children employed held the necessary certificates of fitness. Occupiers were also provided with the necessary forms, and advised regarding the procedure to be followed to secure certificates.

Boiler Inspection.—In all factories where boilers and vessels under pressure were used examinations were made to see that the boilers, &c., were inspected by accredited inspectors within the required periods.

Mr. Inspector Ogilvie reports :—

Registration of Factories.—Many changes to more suitable premises were made in my district during the year, each case showing an improvement in general conditions.

Structural Alterations.—I found it necessary to have some premises altered in order to comply with the provisions of the Act.

Overtime.—Owing to a rush of orders in a large hat-making factory, application was made for an extension of overtime, which was granted. In a large furniture factory application was made for a suspension of Section 49. In view of the circumstances surrounding the application the approval of the Minister was obtained.

Fire Escapes.—Attention was given to fire escapes and where necessary means of escape approved by the Chief Officer of Fire Brigades were provided.

Fencing of Machinery.—Special attention was given to the efficient fencing of dangerous machinery, but some trouble was experienced by reason of employees frequently removing the fencing, or not seeing that the guards were properly adjusted when changing their operations. Most occupiers recognise the fact that they must police their own factories and endeavour to comply with Section 33. Where guards are provided for machines and employees wilfully remove same it would, in my opinion, be a good step if some regulation were made so that action could be taken by the inspector against the offending employee.

Accidents.—One fatal accident happened in a bush sawmill in the far North-western District. On investigating the cause of the accident it appeared that on the date of the accident the occupier and his son, aged 15 years, were working at a small saw-bench, the occupier acting as sawyer and his son as tailer-out. As the occupier was passing the last flitch through the saw a nearby neighbour approached the mill. Hearing the neighbour approaching the occupier and his son turned around to talk to him. At the time the son allowed the flitch, 10 feet by 1 inch, which had passed through the saw to balance on the back carriage. The vibration of the saw then caused the timber to fall upon the revolving saw, and it was thrown forward with great force, striking the occupier on the chest, and inflicting injuries, which resulted fatally. A medical certificate was given of death from shock and cardiac asthenia. In this case the guard provided was not in use.

In a furniture factory an employee was working at a spindle-moulder when he met with an accident resulting in the loss of a thumb. A guard was provided but not used by the employee. As the occupier had been previously instructed to securely fence dangerous machinery, action was taken and a satisfactory penalty inflicted.

In another furniture factory an employee met with an accident whilst working at a spindle-moulder. As a guard was not provided, action was taken and a conviction obtained.

At a large joinery factory two serious accidents happened at a jointer and a chain-mortiser, both employees losing parts of three fingers. At the time of the accident the jointer was securely fenced, but in the case of the chain-mortiser a guard was not provided, although the occupier had been instructed to securely fence the machine in question. Later on, action was taken for a breach of Section 33 and a full penalty was imposed.

At a large engineering works a youth was working at a power press machine when he met with an accident resulting in the loss of parts of three fingers of the right hand. In this case the machine had recently been installed. At the time of the accident the employee was finishing the day's work and on raising himself from a seat near the machine he placed his hand under the dies and unconsciously tipped the pedal with his foot, with the result that the die descended and before he could withdraw his hand it was caught. The employee returned to work and the firm is now teaching him salesmanship for the purpose of appointing him traveller for the firm.

Sanitation.—In spite of the importance of cleanliness and health this matter is much neglected by some employees. During an investigation at a large engineering works it was found that the breach complained of was being committed by some of the employees. The habits of some employees are such that it is very difficult to induce them to eat their meals in a proper place. A system of education seems to be necessary in order to persuade them to conform to the general rules of sanitation.

Mr. Inspector Varley reports :—

District.—During the first seven months of the year I was in charge of No. 5 District, and for the remaining portion of the year I was transferred to No. 3 District as successor to Mr. Inspector Bennet.

Registrations.—A large number of registrations were dealt with during the year, but in most cases they were for small factories, and re-registrations, due to change of occupier.

Sanitation and Hygiene.—Generally speaking it was found that these matters were receiving attention from occupiers, but in three cases it was found necessary to have alterations effected to improve the existing conditions.

Structural Alterations.—In both city and suburban areas it was found necessary in three cases to have structural alterations made for the betterment of conditions generally.

Fire Escapes.—This matter received a good deal of attention during the year, and it was found necessary to have a number of new escapes erected, while alterations had to be made to a number of existing escapes, due to structural alterations, &c. I found that this section of the Act requires the

strictest supervision. In one instance it was found necessary to serve a Minister's order to compel the owners of a nine-storey building to have an escape erected as they had leased part of the two top floors as factories, and no alternate means of escape were provided.

Accidents.—It was found necessary to give this matter careful consideration and attention. Quite the majority of accidents were due to employees taking unnecessary risks and adopting bad practices. One fatal accident happened in No. 5 District caused by an employee using benzine in mistake for kerosene. It was found that employers and employees were showing a willingness to co-operate in maintaining better and safer conditions.

Bakehouses.—In two cases it was found necessary to have structural alterations made, to improve the sanitary arrangements, and to reconstruct an outer oven wall which was in a dangerous state, possibly due to age and the constant heat. Generally speaking, the bakehouses were kept in a cleanly state. In many of them it was found advisable to have hoods, with vents to outside air, erected over the oven and fire doors, this, besides taking the hot gas and smoke out of the bakehouse, helped to keep it cleaner.

Mr. Inspector Young reports :—

During the year 1926 I was in charge of portion of South Sydney, which embraces Waterloo, Mascot, and Botany, and part of East Sydney, including Woolloomooloo and Darlinghurst.

Registrations.—There have been a number of new factories built in the Waterloo area, mainly by occupiers moving from congested city areas. This has resulted in much more commodious premises, with more improved systems of ventilation, sanitation and welfare provisions for employees.

Where alternative means of escape were required it was necessary to call upon the Fire Brigades Department to make recommendations in the construction of the escapes.

There were several changes in occupancy requiring new registrations. In a number of cases factory premises were enlarged. Three occupiers doubled their premises—a boot factory, a paper-bag factory, and an electric-plant factory. The introduction of the latest types of machinery was also very noticeable.

Sanitation.—Sanitary conditions in the great majority of cases were good, and in quite a number of premises sewerage connections were made. It is expected that during the year 1927 the whole of the unsewered factories of Waterloo, Mascot and Botany will be connected.

Fencing and Guarding of Machinery.—I gave a considerable amount of attention to the introduction of a more improved type of fencing. I found wood in general use, and induced a number of occupiers to do away with wood fences and instal iron pipe and strong wire mesh, or sheet iron. In one large factory the whole of the danger points were fenced at an approximate cost of £150.

Accidents.—Accidents of a minor character were numerous. Many of these happened at points where satisfactory guards have been provided, and I feel sure many could have been avoided by the exercise of care on the part of both employees and employers in seeing that guards were properly maintained. A serious accident occurred in a laundry, a woman losing part of her left arm. A satisfactory guard had been provided, but this was rendered useless by the employer permitting the machine to be worked from the wrong side, thus leaving the employee unprotected. In another case a man lost part of an arm. He was using a power press as a cropping machine, and while pushing his finished work from under the press with his hand, he put his foot on the pedal. Prior to this accident, I had directed that the pedal be covered with a metal box, so that the employee would have to use hand levers to bring the press into action. The cover was provided, but, unfortunately, some person inserted an iron bar under it to allow of the pedal being used, thus contributing to the accident. Inquiries failed to procure evidence as to who had inserted the bar.

Fire Escapes.—All existing escapes were examined and found satisfactory. In five new premises Fire Brigade Officers were asked to make recommendations. These were attended to, and approved in all but one case. This was still pending at the end of the year.

Certificates of Fitness.—Proceedings were taken against two employers for failing to procure certificates of fitness for boys employed under the age of 16, otherwise this section was well observed.

Overtime.—Considering the large area covered by my district, there were few notices from employers of having availed themselves of the provisions of permitting females and boys working overtime.

Bakehouses.—Bakehouses were found generally to be satisfactory. I asked for a new impervious floor in one case, where the floor had been worn away by trucks. In odd cases it was necessary to instruct re lime-washing.

Boilers.—I had no occasion to complain, as I found the regulations were well observed.

Senior Inspector Miss Harriott, B.A., reports :—

As I was absent on leave from March to December, 1926, my report must of necessity be brief. During the two months I was on duty in the district, I was engaged in general routine work and inspections under Industrial Arbitration Act.

Registrations.—Twenty-three premises were registered as factories, in most cases re-registrations owing to changes of address. Certain minor structural alterations were effected to bring the buildings into conformity with the requirements of the Act.

Certificates of Fitness.—Three children 13 years of age were granted permission to work in factories owing to special circumstances.

Inspector Miss Brown reports :—

In addition to supervising my own city, suburban and country districts during the year, I have also attended to a city area of an inspector who was absent from the State on extended leave.

Registrations.—Throughout the year registrations were very numerous, mainly re-registrations of previously-occupied premises, but a number covered new buildings specially constructed to meet the requirements of the industries concerned. Many of the re-registered premises, as the opportunity was seized to require present standards to be attained, represented very considerable re-construction and renovation before occupation was entered upon.

Structural Alterations.—Included in above registrations I found two factories constructed for the owners without provision for effective ventilation. One (a two-storied city printing works) had been constructed on modern lines, and of satisfactory dimensions and lighting, but without either inlet or outlet ventilators, as prescribed by the Act, throughout the building, including the sanitary accommodation. Plans of the building had not been submitted to the Department. Fortunately for the occupiers, the building was not quite completed, and on my instructions the architects were required to provide the requisite ventilators. Similarly, on visiting a suburban boot factory, I found insufficient ventilation provided, and, in addition, that none of the windows provided could be opened. They were for lighting purposes only. Subsequently I interviewed the agents for the owner and gave instructions that necessary prescribed ventilators be provided, where indicated, also that windows must be made to open, and so as to improve the permanent ventilation the upper frames of certain of the windows must be fitted with louvres. These instructions were satisfactorily carried out. I have always stressed the necessity for the submission of all factory building plans to the Department, so that such obvious architectural errors can be corrected.

Remedial orders are usually readily complied with. In several instances, I had dressing-rooms provided for female employees, and minor alterations effected, also additional wash-basins and W.C.'s where necessary. In one factory under my supervision, the whole sanitary arrangements were re-constructed on the most up-to-date lines, the provision of shower-baths being included for the female employees, which were very much appreciated, as the industries carried on were of a rather dirty nature.

In a wool-spinning factory in one of my suburban areas, very extensive alterations and additions are being carried out, including a new dye-house that, when completed, is claimed, will be the most up-to-date in the State, and the additional factory area available will house extra machinery sufficient to double the present staff and output.

Sanitation.—Constant supervision is necessary to maintain a standard of general cleanliness, and, unfortunately, insufficient co-operation is evidenced between employer and employed in that direction. However, as the onus of maintaining cleanly conditions is on the occupier, such supervision should be exercised, and proper arrangements made for regular and satisfactory cleansing as will ensure compliance with the requirements of the Act. Careless and indifferent employers cannot avoid their responsibility in that direction. In a suburban boot factory I found very uncleanly and continuously neglected conditions evidenced. The premises were comparatively new and in good order, requiring just ordinary attention. In this case proceedings were taken and a substantial fine inflicted.

Overtime.—A considerable amount of overtime was worked during the year within prescribed limits and conditions, and in some breaches detected warning letters were sent. In more serious breaches found in a suburban whitework factory, where excessive overtime was worked, proceedings resulted in a fine of £2 and costs. Also in a city food factory grossly excessive hours of overtime had been worked and, in addition, the overtime so worked had not been notified to Department. Action was taken in three cases, and a fine of £2 and 8s. costs resulted in each case. The magistrate commented on the flagrant disregard of the Act.

Similarly, in a printing works, the prescribed limit of 30 times working was exceeded, and overtime was not notified. Fines of £1 and £2 and costs were inflicted. Breaches similar to the above were detected in a suburban laundry, and similar fines resulted on proceedings being taken.

I reported on fifteen applications for extensions of overtime, covering a wide scope of industries, viz., printing, cereal food packing, collapsible metal tubes, wine bottling, tea packing, music rolls manufacturing, corsets and brassieres, laundry and millinery. The extensions applied for varied from 10 to 30 additional nights. In all cases the employees expressed their willingness to work and the exigencies of trade were such as established the necessity, added to the fact that, on inquiry, extra labour was not available, and the Minister granted all applications.

I also dealt with an application received from a cereal food factory for females to be allowed to work on a night shift to enable the firm to increase their output. However, as such working would be in direct contravention of sections 46 and 43 of the Act, and also against the spirit of international conventions, this application was refused by the Minister on my report.

Certificates of Fitness.—During the year I found this section of the Act fairly well observed, but there are still some delinquents. In some breaches detected, warning letters were considered sufficient, but in a large furriery I found several boys and girls without certificates, having been in employ for lengthy periods. Proceedings were taken in three cases, and substantial fines resulted. In a linen-working factory similar breaches being disclosed, similar action and fines resulted. Careless occupiers usually engage their juniors without requiring them to apply for their certificates, and the matter is forgotten until production of same is called for by the inspector.

I investigated 25 applications for permits under section 40 for Minister's permission for girls under 14 years to work in a factory, and subsequently two were withdrawn. Of the remainder, 3 were refused, but the rest, amongst whom the majority were nearly the required age, and whose circumstances showed sufficient stress, were all granted by the Minister. In two cases I found very distressing poverty, and recommended them to the Chief Secretary's Department for further assistance, which was granted them, and each expressed their grateful thanks.

Laundries.—Fairly satisfactory conditions were maintained in laundries in my areas during the year, cleanliness and general limewashing being fairly well attended to. In one laundry in a suburban area, considerable alterations and additions have recently been effected and further improvement is to be

carried out in the installation of a method of heat extraction, by means of hoods and flues erected over the calender machines, to provide more comfortable working conditions for the employees concerned—a very necessary improvement.

General.—Most industries were fairly busy during the year, although there were some slack periods in the seasonal trades. A few were so busy that they could not keep pace with orders even with extended premises and increased staffs. Increased activities were evident in the boot trade and slipper making.

Welfare Work.—In many factories morning tea is supplied to the employees, and many other comforts, including comfortable rest rooms, suitably furnished; but many others leave a lot to be desired, seeming to regard anything in the nature of welfare work as an indication of weakness. But it is quite noticeable that the latter have considerably more trouble in obtaining employees. In a suburban whitework factory recently built, I was agreeably surprised to find included in the finishing off of the nice white-painted interior, a number of large hanging baskets of ferns and plants were suspended at intervals throughout the ceiling, and, in addition, a trellis on which quantities of staghorns, elkhorns, and ferns were banked up and so placed as to be visible through the open windows. The whole ensemble was very green and cool-looking as well as restful for the eyes of employees when raised from their work. Quite a novelty for workrooms and much appreciated by the employees concerned.

Inspector Miss Scobie, O.B.E., reports :—

Registrations.—For the year 1926 the registrations within the limits of the extensive factory district under my supervision were numerous and varied. During the period four new buildings—in suburban areas—were registered as factories. The main body of registrations effected throughout the year related to change of occupiers.

As it so often happens that change of occupier means change of industry—requiring structural adaptations—it is obvious that this is an important phase of factory work, one which calls for close and unremitting care. Where the employment of female labour is involved, such changes frequently present problems which claim the serious attention of the woman inspector.

Prior to the completion of one of the new buildings referred to, the owner invited me to offer any suggestions calculated to improve the building and thereby increase the comfort and well-being of his employees. I made several suggestions, which were carried out at an additional cost to the owner of £180.

Subsequently, following several weeks' occupation during the summer months, the owner, who is also the occupier, expressed his appreciation of the improvements.

Structural Alterations.—In six factories situated within the metropolitan area, and employing in the aggregate three or four hundred women, structural alterations of an extensive character were carried out. Lighting, ventilation and working conditions were, in each case, vastly improved.

Hygiene.—With the expansion of secondary industries it naturally follows that the health hazards are becoming more complex and grave. One example will serve to illustrate this statement.

Towards the end of 1926 I visited an engineering plant, which hitherto had not employed women, and found that within the space of a few months this firm had enormously increased its output of electric accumulators. I was informed by the manager that a medical examination of the staff engaged upon this work had disclosed that thirteen (13) were suffering from lead poisoning, and that, following medical advice, the firm had immediately dispensed with female labour, as, to use the manager's words, " they had unknowingly been working on the edge of a precipice."

The dangers inseparable from this industry having been pointed out, the firm immediately set to work to reconstruct the premises and adopt more scientific methods in the handling of lead.

I find that the average employer is anxious at all times to safeguard and conserve the health of his employees, and prepared to accept helpful suggestions.

A fairly high standard of cleanliness was maintained in the majority of factories under my supervision.

Overtime.—During the year four applications for extension of overtime were dealt with by me. On the reports furnished the application in each case was granted. Two applications were from hosiery mills, one from a printing establishment, and one from a grocery packing factory.

Following a general inspection of a white work factory and an investigation into overtime worked by a number of girls, I found that these girls had worked in excess of 5 hours, had not been paid tea-money, and had worked overtime on more than the three consecutive nights permitted under the Factories and Shops Act, 1912. For these breaches the employer (a woman) was prosecuted by the Department.

Certificates of Fitness.—Notwithstanding the care exercised by the majority of factory occupiers in securing certificates of fitness for all juvenile labour, there is need for constant vigilance in this direction.

In the course of the year I made investigations in connection with twelve (12) applications for special permits for girls under 14 years of age. In each case the circumstances as set out in the reports furnished by me warranted the granting of the application.

General.—In view of the increasing use in certain industries of sheet celluloid, I have found it necessary to ask occupiers of factories to exercise care in the use and storage of this material owing to its inflammability.

In a factory manufacturing bi-focal lenses I found several youths working in an almost hermetically sealed workshop in a temperature of 89 deg. Fahrenheit. The conditions were subsequently remedied by reconstruction and the addition of extra means of ventilation.

During the latter part of the year I was engaged upon special work for the Chief Inspector, in connection with amending factory legislation.

Inspector Miss Stuart-Robertson reports :—

Registration.—Several fine buildings have been erected in my suburban districts, and I am pleased to report that ventilation has received due consideration as well as natural lighting.

In my city districts many modern buildings have been erected. These large chambers being conveniently situated for the quick transport of manufactured goods, were rapidly occupied for the making of women's clothing, millinery, underwear, artificial flowers, silk lamp-shades and other similar goods.

The construction of the city railway has been responsible for the demolition of several factories and shops. Fortunately, two large buildings had been remodelled in this area, and new registrations have been obtained by occupiers thus displaced.

Sanitation.—I have experienced very little trouble in the new buildings in my city district in re, and to cleanliness, as caretakers and cleaners are usually employed by the landlord to keep passages, stairways, and sanitary conveniences scrupulously clean. The interiors of sanitary conveniences being constructed of white tiles or marble has obviated the necessity for periodical lime-washing. In the old buildings constant and careful supervision is still necessary, and I served numerous orders on occupiers to have premises cleansed or lime-washed, also to instal additional closets and wash basins, and to repair cistern and seats in those closets already provided.

A constant source of trouble is created by occupiers, who appear to allow their factories to reach the maximum of uncleanliness before the Inspector, in making the periodical visit, finds it necessary to serve an order to clean the premises forthwith and warn the occupier to keep the premises in a cleanly state.

In some of these factories conditions existed which it would be impossible to imagine. I am pleased to report that my constant supervision and warnings have brought about a much more satisfactory state of affairs. Only in cases of wilful disregard of instructions has prosecution resulted. The occupier of a large clothing factory was fined £10 for failing to keep his premises clean.

Overtime.—A very considerable amount of overtime has been worked but strictly within statutory limits. When making inquiries in connection with applications by occupiers to work additional overtime, I found that the working of the overtime was necessary to meet the exigencies of trade, so I recommended the granting of the applications.

Certificates of Fitness.—This matter requires constant supervision and necessitates the questioning of the majority of girls on every visit to a factory. I have frequently found girls under 16 years of age employed for whom no certificate had been procured.

Fortunately, the greater number of girls were certified by the doctor (subsequently) to be physically fit to work in all classes of factories. Two only were found to be suffering from complaints, and fit only for light duties.

On three occasions I found children under 14 years of age working in factories from whom the occupiers had accepted the certificate of exemption from school from the Department of Education as a certificate required by Section 45. I informed the occupier that their employment must cease, and I then gave the necessary information to the mothers of the children *re* an application to the Minister for a special permit to enable them to be employed in factories.

The application under Section 40 referred to me for investigation resulted in disclosure of necessitous circumstances, and I recommended the applications to the favourable consideration of the Minister.

Seating Accommodation.—This important matter caused me a good deal of concern as I found considerable evasion of the provisions of the Act, particularly in some of the large factories, and had difficulty in having seats provided. I also served numerous orders on shopkeepers to provide seating accommodation for their shop assistants. The amount of fatigue suffered and injury caused by too long standing was painfully apparent in the faces of the females who were required by their employers to suffer this injustice or lose their position.

General.—In most of the industries where women or girls are the only employees normal employment has been sustained, and employment of women and girls has extended to several factories where for years only men and boys were employed. This was due to the occupier adding additional branches of the industry within the factories.

The employees in the manufacturing jewellery trade have been gradually decreasing in number for some years. I was informed by manufacturing jewellers that this decrease was due to the amount of imitation jewellery and various kind of cheap ornaments now worn by women and girls. One occupier predicted that when good jewellery was again in demand there would be no tradesmen to make it.

Owing in a great measure to the expansion of trade in the dressmaking industry, experienced women are receiving considerably more than award rates, and employers in this industry are unable even at these high rates to procure sufficient labour.

Inspector Clark (Officer-in-charge, Newcastle) reports :—

The year just closed saw further expansion of industrial activity throughout the Newcastle District. Existing industries have grown and developed, extended and modernised their plants and field of operations; increased their staffs and the New Year should disclose further developments along these lines.

A considerable portion of my time was devoted to Labour Exchange work. The Main Roads Board in its programme of road development absorbed large bodies of men through this agency, and in consequence the work of the branch increased considerably and necessitated the employment of additional staff.

The Newcastle area was slightly reduced during the year by excluding the territory north of Taree to the Hastings River, which was added to the North Coast District. This was due to the inability of the Inspectorial staff to cope with the area under its control. Hitherto, the country areas of the Newcastle District had been supervised by three inspectors, whereas the work has now to be done by two, the reduction being brought about by my inspectorial duties being limited to the city areas to enable me to supervise the general work of the branch.

Registrations.—Additional factories have been added to the register during the year, the movement being progressive by reason of the increasing use of mechanical power in industry and the growth of the manufactures, apart from the numbers occasioned by the changes of ownership.

Structural Conditions.—The year disclosed further improvement in this regard, and the tendency is all in the direction of having up-to-date buildings with plenty of natural light and ventilation as an economic necessity.

Fencing Machinery.—This provision of the Act calls for constant attention and increasing vigilance in supervision as the result of the growth and development of machinery in industry. Section 33 provides that all dangerous machinery must be fenced whilst in motion, and specifically provides, without qualification, for the fencing of mill gearing. Occupiers of factories in many cases, even in large mechanical plants, have crude and vague ideas of the seriousness of unprotected mill gearing. I have seen new machinery installed in new buildings, the mill gearing of which was thought to be amply protected but which did not nearly approximate our standard, and set up a false security to many workmen whose duty it was to move in and about and use the machinery. The defects when pointed out were quickly remedied, but the point to be noted in passing is that increasing vigilance is necessary to secure effective results in the fencing of dangerous machinery. Generally, however, improvement has been steadily progressive. Deal boards and other flimsy articles of protection, which although they did not suffice in the years that have passed were tolerated, are passing, and steel piping with mesh wire framing is coming more generally into use. Maintenance of fencing in the operation of machines is an essential necessity, but there are many who still feel no sense of personal responsibility in this regard. Machines are operated with guards either imperfectly adjusted or left out of use altogether. Direction to remedy the omissions is met with explanations which clearly demonstrate lack of attention. This further emphasises the view that regular and constant visitation is essential to the prevention of accidents.

Accidents.—The number reported as coming within section 38 was, fortunately, less than in previous years. None were fatal and few resulted in loss of limb. Most of these came within the category of minor casualities such as cuts on hands and fingers. Some demanded amputation of joints of fingers, occurring, mostly, in the operation of woodworking machines. In some cases the causes were attributed to the reasons already mentioned in the preceding paragraph, the irregular maintenance of effective guards. The guards in many cases were effective, but their adjustment and maintenance were not satisfactory.

Fire Escapes.—One new fire escape was approved by the Officer-in-Charge of Fire Brigades and erected during the year at the premises of a large dressmaking establishment in the city. Existing escapes have received attention to ensure that exits, and the approaches thereto, were unobstructed and clear during the time that persons were working in the factory. The observance of this provision was well maintained.

Overtime.—In the last quarter a fair amount of overtime was worked by females in the clothing, dressmaking, and millinery trades, due to seasonal requirements. Except for these instances, little if any overtime, within the meaning of the section, has been worked during the year.

Certificates of Fitness.—Compliance with the provision of section 45 has been general during the year. No instances occurred wherein disciplinary measures were needed to emphasise the importance of the section.

Boiler Regulations.—Observance of the provisions for the inspection of boilers and other pressure vessels was well maintained.

Mr. Inspector Armstrong (Newcastle) reports.

For the first two months of the year I carried on my inspectorial duties in the near North Coast, Newcastle and near Northern District. I was then transferred to head office, and No. 8 Metropolitan District was allotted to my charge. This district including as it does Redfern, a larger industrial district, demanded my constant attention and vigilance in order that the full requirements of the Factories and Shops Act might be complied with, especially in view of the fact that large numbers of once residential areas are giving way to industrial undertakings with the necessary re-conditioning and erection of factory premises.

Registrations.—A large number of applications for registration of factory premises were dealt with during the year and, although the majority of these were the subject of change of occupancy, it is pleasing to note that a fair number were from new employers. By far the most noteworthy of these was the registration of large suburban premises where an industry recently introduced to Australia is being carried on. A very suitable and modern building was secured for the recording and subsequent manufacture of gramaphone records. The plant when fully installed will provide congenial labour for several hundred local employees, and the finished article produced to date compares most favourably with the best imported records.

Structural Alterations and Ventilation.—Several factory occupiers who found it necessary to enlarge existing premises resorted to the very desirable method of submitting plans to this Department for guidance respecting the provisions of the Factories and Shops Act prior to reconstructing or altering of premises and doubtless saved considerable expense and time thereby. I might instance the matter of new premises which were erected in the city and which were built without any reference to this Department. When an inspection was made in answer to an application for registration of these premises it was found that the only ventilators in the building, other than windows, were air-bricks ventilating from the lavatories and W.Cs. into the workroom. The subsequent ventilating of these otherwise excellent premises must have been very costly, and this cost could have been obviated had the plans been submitted prior to the commencement of the building.

In another factory it was necessary to serve an order by the Minister to provide better ventilation consequent upon the re-arrangement of the plant; the extra ventilation subsequently provided will have the effect desired.

Sanitation.—Sanitary conditions generally were of a fairly high standard although I found it necessary to instruct the occupiers of two city factories and a suburban factory occupier to provide additional W.C. accommodation to comply with Regulation 15. In each instance it was found that sufficient accommodation had originally been provided for the employees, but increased trade had necessitated increased staffs till the number of employees had outgrown the legal limitations permitted. I am glad to say that it was not necessary to resort to extreme measures to have these defects remedied, as each of the occupiers made immediate arrangements to carry out my instructions.

Fencing of Machinery.—I gave much time and consideration to this most important feature of factory work, and am pleased to report that, especially in some of the larger and more modern factories, occupiers are showing a keener desire to co-operate with this Department in order that the best guards available might be brought under their notice. In passing I feel bound to draw attention to the valuable asset which this Department has in the shape of the model machines and guards and the interest shown by factory occupiers who have taken the trouble to inspect these models prior to finally deciding on any particular type of guard. The models have also been the means of materially assisting inspectors in the conduct of proceedings for breaches of section 33 of the Act.

I notice, with appreciation, that many Australian machinery manufacturers are including safety devices, especially to mill gearing, bevel drives, gears, &c., as an integral part of the machine, and I found that such additions are subject to less interference by employees than if the guard was fixed as an extra part. I gave directions to many occupiers to replace the very dangerous projecting set screws and keys on shafting, especially overhead, with grub screws, and although one factory manager told me it took two fitters three weeks to carry out my instruction I am sure the expense incurred was well worth while.

Accidents.—I investigated a considerable number of accidents during the year, a large proportion representing injuries of a minor character to employees at a large suburban wireworks. I regret, however, to report that towards the latter end of the year an adult employee at an iceworks, was so severely injured as to succumb shortly after the accident. This employee was engaged at a gang of ice saws when the driving belt from an overhead motor pulley ran off the pulley and in endeavouring to put the belt on the still revolving pulley he lost his footing and fell to the ground striking his head on the ice platform in the fall.

Another serious accident at an ice factory was caused through a young child who went to the factory to buy ice, going beneath the ice platform to collect ice chips deposited there during the process of ice sawing, and in so doing his head contacted with the revolving saw inflicting frightful injuries. Had there been a fence to obstruct any person from getting under the platform the accident could not have happened. On the other hand whilst the factory occupiers invited persons to purchase ice at the factory it is questionable whether this child was not a trespasser at the point where the accident occurred.

Another fatality which occurred in my district, though not at factory premises, is of sufficient interest to mention. At a city council sub-station a 33,000 volt. oil switch exploded, an employee being so enveloped in burning oil as to succumb to the injuries received shortly after the accident. An extensive investigation revealed the fact that a short had occurred at the drainage coils at the main generating station and the resultant rush of current was carried on to the transformers at the sub-station. The transformers were unable to accept the sudden surge which passed into the switch causing an arc of such intense heat as to vapourise the oil. The gas so generated having no means of escape burst the switch casing, at the same time spraying a large quantity of burning oil over the major portion of the premises. In consultation with responsible officers of the Electrical branch of the City Council it was suggested and decided to fix ventilating pipes to all the oil switches in use, as a means of preventing similar accident.

Bakehouses.—Bakehouses generally were found to be kept in reasonably good condition, although it was found necessary to serve instructions to limewash premises on occasions. A bakehouse long in disuse had fallen into such a state of decay that application for permission to again occupy it, for the same purposes, had to be refused. In co-operation with an officer of the Health Department and the local building inspector a list of required alterations and improvements was framed, and these, when carried out, rendered the premises fit to be registered.

Fire Escapes.—In co-operation with Inspector Skelton of the Fire Brigade much good work was done in inspecting existing escapes and offering advice where new escapes were to be provided. I had occasion to draw several factory occupiers attention to the regulations governing access to escapes, and obstructions on escapes; the warnings issued should have the desired effect.

General.—It is very pleasing to note the improved type of modern factory premises in comparison with the factory of even ten years ago. Much more consideration is now given to the employee from hygienic, recreation, and medical viewpoints, which indicate generally that present day factory life is on a far higher plane than in years gone by.

Mr. Inspector Hastie (North Coast) reports :—

During the year under review two additional areas were added to the district, viz., from Warrell Creek to Telegraph Point. early in the year, and from Telegraph Point to Melinga in July. The new areas embrace the country between the Nambucca and Manning Rivers.

The district is worked from Head Office with tours of from eighteen to twenty-one days' duration. etween tours I assisted in the Metropolitan districts, principally the Illawarra suburbs.

Registrations.—The registrations have been fairly numerous, though mostly confined to changes of occupancy, especially amongst bakehouse proprietors. It is a rather strange coincidence that, without exception, on every visit of inspection to the larger towns a change of occupancy was noted, requiring re-registration. Several new sawmills were registered on the Glenreagh to Dorrigo railway line, and others are contemplating removing their plants on to sites in proximity to the line for more adequate means of transport. The number of registered factories in the district is in advance of the number for the previous year.

Sanitation.—This is a portion of the work that needs constant supervision, owing to the fact that the system throughout the country is mostly the "pan system." A few of the larger towns have the septic tank system in operation, but it is only confined to practically the main streets of the towns, and as a number of the factories are situated outside these areas they do not have the advantages of the system. With the pan system careful attention is required to ensure maintenance of satisfactory conditions.

Fencing of Machinery.—This phase of the work is ever dominant in the mind of an inspector, and it is pleasing to note that occupiers are only too eager to acquiesce in any practicable suggestion offered. One finds a certain amount of carelessness shown by the individual employee, inasmuch as a guard or fence may be taken down so that overhaul and attention to machines may be carried out, and it often happens that the guard is not replaced immediately.

Taken generally occupiers have given no opposition to this most important section of the Act.

As an instance of carelessness one occupier was prosecuted and convicted for failing to fence, although the guard was on the premises, but instead of being on the machine, it was hanging on the wall.

Accidents.—There were no fatal accidents during the year, and it is pleasing to report that few accidents occurred. Of those investigated one was of a serious nature. A lad employed at a smallgoods factory lost three and a half fingers from his right hand through coming into contact with the cutters of a mincing machine, although an approved guard for this machine was in the workroom it was not in use. The occupier was prosecuted and convicted for a breach of section 33.

A painful accident occurred at a sugar mill whereby an employee was severely scalded about the body with hot water. He was attending to a feed water valve, when a wooden plug that had been driven in to the casing of the valve chest from the outside blew out.

Other accidents were of a minor nature, being mostly cuts and bruises.

Fire Escapes.—All the factories in the district are on the ground and first floors with the exception of one at Lismore. This has an external fire escape which is in conformity to requirements.

Certificate of Fitness.—This section of the Act is fairly well observed by occupiers and only on a few occasions has it been found necessary to issue instructions to obtain the certificate required.

Overtime.—Notifications *re* the working of overtime have been received from one firm only, and they have been well within the period allowed by the Act.

Bakehouses.—These were found to be generally well up to the requirements of the Act, and there were evidences of a genuine effort on the part of the occupiers to keep their premises in a clean state. I found on one tour that a Health Inspector had just previously visited a number of bakehouses in my district and had no fault to find with any of them, which shows that the occupiers are keeping their bakehouses in conformity with the law.

Boilers.—As far as boilers are concerned there has been no necessity to report for failing to have a certificate. In a number of motor garages I found that the occupiers installed air compressors with air receivers and they had no certificate, but after explaining the regulations to them they immediately rectified the omission.

General.—All the main towns were visited twice during the year and a fair number of outlying and small towns once. Some of the outlying towns were not visited.

I am pleased to note the willingness of factory occupiers to learn of the latest safety devices and to adopt them quite readily.

Mr. Inspector Waugh (South Coast) reports :—

Registrations.—During 1926 a fair number of registrations were effected, the bulk of these being through a change of occupiers.

Sanitation.—Sanitary conditions were fairly good, remembering that the pan system still operates in the South Coast District.

Fencing Machinery.—Little trouble was experienced in getting occupiers to fence and guard all dangerous parts of machinery.

Accidents.—Only one fatal accident happened in this district during the year due to moving machinery. A man was feeding a revolving pan at a brickworks, and it is thought that he fell over the fence into the pan and was crushed by the rollers. He died in the hospital from the effects of the accident.

Bakehouses.—Bakehouses generally were well kept, but some occupiers have the habit of waiting until directed to carry out limewashing.

Certificates of Fitness.—This section was well observed, only a few occupiers, and mostly in small factories, showing inattention.

Boiler Inspection.—I had no occasion to furnish any reports in this matter as the regular visits of insurance companies inspectors kept the occupiers well in touch. I found the certificates exhibited as required.

General.—With the exception of the coke industry all other trades worked fairly well during the year and the outlook for 1927 is considered fairly good.

Mr. Inspector Wallace (South Western) reports :—

During May, 1926, I was transferred from Goulburn to Head Office from where the district has since been worked, the Goulburn office being continued for Labour Exchange purposes.

Registrations.—A large number of registrations, mostly re-registrations, were dealt with.

Structural Alterations.—Improvements were made in several factories, and arrangements entered into with owners and architects to carry out structural alterations. Several new buildings were erected.

Fencing Machinery.—This section of the Act requires continuous attention to prevent accidents, otherwise occupiers are neglectful in keeping the fencing up to a proper standard.

Accidents.—The most serious accidents occurred at a joinery shop where a foreman first met with an accident on a small circular saw, cutting off part of the fourth finger of his left hand and injuring the third finger. About one month later he had the first joint of his right index finger taken off in jointer machine which was fitted with circular head and guard. In each instance he appeared to have contributed towards the accidents.

Action was taken against two occupiers for failing to maintain guards over mincing machines, and fines were imposed in each case.

Overtime.—Overtime was mostly worked in one women's and children's garment factory at Goulburn, otherwise conditions generally were normal.

Certificates of Fitness.—This section of the Act was well observed.

Bakehouses.—Arrangements were entered into for the erection of three new bakehouses and for improvements to several others.

General.—I am sorry to report the closing down of a large boot factory and tannery during the year at Goulburn, which will mean a great loss to that city, over 300 employees being affected.

It is expected that a large company will commence the erection of cement works at Berrima during the ensuing year, and it is anticipated that about 1,000 men will be employed by November, 1927. The initial steps have already been taken.

A large stone crushing works is in course of erection at Berrima, and may employ about ninety persons.

Mr. Inspector H. McEvoy (Wagga Wagga) reports :—

Registrations.—During the year I dealt with 150 registrations, a fair percentage, however, being due to change of occupancy of premises. Two premises intended for use as bakeries and one as a printing establishment did not meet with the requirements of the Act, and permits only were granted for a period sufficient to enable the applicants to obtain suitable premises. Certificates of registration were also withheld in connection with three premises—used as electric light and power stations—pending the carrying out of instructions mentioned in paragraph following.

Structural Alterations.—In three towns large substantial buildings were erected for use as electric light and power stations, gas-producer plants being installed; but the provisions of Act (Regulation 8) governing gas-producer plants were not observed. Instructions served upon the occupiers to comply with the Regulations were carried out. The omission, in the first instance, of compliance with the Regulations again illustrates the necessity for plans of buildings, intended for use as factories, being submitted to the Department for approval before premises are constructed.

Sanitation.—The sewerage system is gradually being extended in country towns, thereby ensuring better hygienic conditions. Where the pan and earth closet system still obtains constant supervision is necessary to maintain cleanliness.

Fencing of Machinery.—Strict attention has been given to the fencing and guarding of machinery. Notwithstanding many improvements in safety devices for safeguarding dangerous parts of machinery vigilance of the inspector is necessary to enforce the maintenance of efficient fencing and guarding. Instructions were served on a number of occupiers to securely fence dangerous parts of machinery or to replace guards which had been removed from above knives of planing machines or from meat-mincing machines.

Boiler Regulations.—Instructions were served on a number of occupiers to comply with provisions of Regulations 1, 6, and 7. Upon making an inspection at a factory I found the allowable steam pressure of boiler being exceeded by 10 lb. I instructed the person in charge of boiler to reduce the steam pressure to that shown on exhibited boiler certificate. He complied with instructions, but upon my returning to the factory about two hours later I found the steam-pressure gauge registering 15 lb. in excess of allowable pressure. Proceedings were instituted against occupier for breach of Regulations, resulting in a conviction being obtained and a fine of £5 and 16s. costs being imposed.

Accidents.—Several accidents were reported. Investigations of same proved that the majority were of a minor character and attributable in a number of instances to indifference or carelessness of employees when at their work. The serious accidents resulted in loss of fingers of hand, caused whilst operatives were working at circular saws and jointer machines. Inquiries into cause of accidents did not disclose any negligence of employers with respect to providing of fencing or guarding of machinery.

Certificates of Fitness.—In a few instances—principally in motor repair works—I found it nesessary to serve notices to obtain certificates of fitness for employment of boys under 16 years of age. The employers were under the impression that boys under 16 years of age could be employed in a factory without a certificate of fitness provided their duties did not entail working at machinery.

Bakehouses.—The provisions of Act in regard to lime-washing and cleanliness of premises were well observed by the majority of occupiers. As mentioned in paragraph relating to registrations, in two instances applications to register premises for bakehouse purposes were refused on account of buildings being unsuitable for the industry.

Fire Escapes.—In factories where fire escapes are necessary observance of requirements of Act was maintained.

General.—My duties under Departmental activities, other than factory inspection, commanded a large portion of my time and necessarily curtailed the number of factory inspections possible during the year.

Mr. Inspector Baker (Western District) reports:—

I was absent from duty, on accumulated leave, for 86 days during the year, and was, therefore, unable to make a complete circuit of my district.

Registrations.—In addition to alterations to the register made necessary by changes in occupancy, there was a noticeable increase of new registrations.

Sanitation.—I found the factories visited to be satisfactorily kept, but I lost no opportunity to improve the standard of buildings, light, ventilation, and sanitary arrangements. The periodical lime-washing of work-rooms also received attention.

Bakehouses.—One bakehouse, an old structure of wooden slabs, was closed, the owner on my advice having decided to replace it by one of modern design, containing all necessary conveniences.

The matter of special means of ventilation over oven furnaces was further prosecuted, and a number of these ventilators were fitted, at my direction, and proved satisfactory.

When one considers the manner in which bread is made, especially the making of doughs by hand, strenuous work carried out in a very warm atmosphere, the need for cleanliness of the highest order is apparent.

I am pleased to report that some of the country bakers have installed dough-making machines, and that the machines are spoken of as being most effective and economical.

Fencing Machinery.—This important matter engaged my constant attention, and with very few exceptions I found fences and guards maintained. A new type of meat-mincing machine came under my notice during the year. The neck of this machine has been so constructed that it is impossible for an operator to place his hand in contact with the revolving cutter. It is pleasing to record such an instance, as safeguards at machines have not, in the past, been given sufficient consideration by machinery designers.

Boiler Regulations.—In factories where boilers or other pressure vessels were used I inspected the certificates, and, where necessary, instructed occupiers to comply with the regulations.

Accidents.—Five accidents under Section 38 were investigated. The most serious occurred at a Paten Press in a Printing Works, the person injured, a very old and experienced employee, losing two fingers of his left hand. The other accidents occasioned no serious loss or injury.

Fire Escapes.—No persons were employed above the first floor of any factory registered during the year. Existing means of escape were regularly inspected.

Certificates of Fitness.—In several instances I found boys under 16 years of age employed without having first obtained a certificate of fitness. In each case the lad had only been employed for a short period, doing light work, and was not engaged at or near machinery. The occupiers were warned, and certificates were obtained.

Overtime.—No breach of this section came under my notice.

General.—Additional Electric Light and Power Stations (Municipal) commenced operation during the year at Condoblin, Blayney, Wellington, and Nyngan. Including the station owned by a Company at Dubbo, and the privately owned station at Warren, there are now 8 towns west of Bathurst in this District provided with fully equipped electric light installations.

At the end of the year the number of employees at the Orange Woollen Mills was 148. Although many of these had no previous experience in the woollen industry, they were being taught by a number of skilled operatives brought out by the Company from England. It is generally stated that the materials now being manufactured at this mill are of a high quality, and that orders are coming in so fast that they cannot be coped with.

Mr. Superintendent Inspector Huntley reports:—

The industrial importance of Broken Hill claimed my attention and services during the whole of the year.

While the number of factories in this area is not large, so many additional Departmental activities were encountered, that, without office assistance, I found my hands continually full. Conciliation work, labour exchange work, gas inspections, and testing, and inspections under the Industrial Arbitration Act required the major portion of my time.

The factories generally were found to be in conformity with the Act and those exerting mechanical power had their machinery satisfactorily safeguarded. No accidents were reported.

The foodstuff places were greatly improved to the satisfaction of the local sanitary authorities and of this Department. The occupiers were ready to meet my wishes, and no prosecutions under the Factories and Shops Act resulted during the year.

A water famine was experienced reaching its climax in March, when all the mines were shut down creating much unemployment. With the Mayor and Superintendent of Police I served on the local committee appointed to deal with cases of distress, and this occupied a great deal of time. During the trouble I registered several thousand names in the Labour Exchange section, but fortunately, when the outlook was very bad, rain fell, and the position was eased.

I returned to head office at the close of the year.

Appendix I.

Persons employed, by Class of Factory, Classified by Industry—1926.

THE STATE.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
CLASS 1.—TREATING RAW MATERIAL, THE PRODUCT OF PASTORAL PURSUITS.												
(a) Animal Products.												
Boiling-down and tallow-refining	10	1	...	...	...	4	...	117	...	117	...	122
Glue	2	...	4	3	22	6	23	128	19	137	68	205
Tanning	68	31	1	57	4	59	5	951	2	1,098	12	1,110
Wool-scouring and fellmongering	35	6	...	25	...	46	...	691	...	768	...	768
Other animal products	8	39	...	38	...	29	...	159	...	265	...	265
Total	123	77	5	123	26	144	28	2,046	21	2,390	80	2,470
(b) Vegetable Products.												
Chaff-cutting	137	...	...	2	...	15	...	408	...	425	...	425
Total, Class 1	260	77	5	125	26	159	28	2,454	21	2,815	80	2,895
CLASS 2.—OILS AND FATS—ANIMAL AND VEGETABLE.												
Oil and grease	8	14	...	6	...	9	...	190	...	219	...	219
Soap, candles, &c.	25	23	26	31	55	54	78	396	80	504	239	743
Total, Class 2	33	37	26	37	55	63	78	586	80	723	239	962
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.												
Asphalt	11	1	...	5	...	9	...	111	...	126	...	126
Bricks and tiles	150	110	...	246	...	272	...	3,021	...	3,649	...	3,649
Glass and glass bottles	7	41	...	74	8	80	14	844	1	1,039	23	1,062
Glass (ornamental)	33	41	...	61	3	70	8	340	9	512	20	532
Lime, plaster, and cement	20	3	...	2	...	28	...	529	...	562	...	562
Marble and slate	18	...	...	11	...	14	...	215	...	240	...	240
Modelling and fibrous plaster	35	13	...	26	...	41	...	212	...	292	...	292
Monumental masonry	32	4	...	16	...	13	...	231	...	264	...	264
Pottery and earthenware	18	83	...	73	1	79	3	559	20	794	24	818
Stone-dressing	54	5	...	10	...	21	...	594	...	630	...	630
Other works	27	2	...	21	...	38	...	427	...	488	...	488
Total, Class 3	405	303	...	545	12	665	25	7,083	30	8,596	67	8,663
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	...	...	...	...	...	...	...	...	...	...	...	...
Boxes and packing-cases	62	22	...	55	...	94	6	743	5	914	11	925
Cooperage	10	11	...	14	...	25	...	236	...	286	...	286
Joinery	343	81	...	336	...	421	...	2,807	...	3,645	...	3,645
Saw-milling—Timber	606	44	...	191	...	271	1	3,526	1	4,032	2	4,034
Firewood	223	4	...	11	...	16	...	346	...	377	...	377
Wood-turning	28	12	...	6	...	14	3	112	4	144	7	151
Other works	41	23	...	30	8	69	8	312	3	434	19	453
Total, Class 4	1,313	197	...	643	8	910	18	8,082	13	9,832	39	9,871
CLASS 5.—METAL WORKS, MACHINERY, &c.												
Agricultural implements	21	9	...	18	...	48	...	286	...	361	...	361
Brass and copper...	80	56	6	131	21	149	5	678	10	1,014	42	1,056
Cutlery	28	1	3	10	7	13	2	97	...	121	12	133
Engineering	372	273	12	670	9	901	32	6,989	28	8,833	81	8,914
Galvanised iron	59	65	...	168	6	140	2	1,011	...	1,384	8	1,392
Iron works, foundries, and boilermaking ...	178	166	...	511	4	590	5	9,252	12	10,591	21	10,540
Iron safes and doors	6	6	...	10	...	14	...	112	...	142	...	142
Lead-mills...	3	...	...	4	...	16	...	34	...	54	...	54
Railway carriage works	1	48	...	50	1	37	3	152	2	287	6	293
Smelting and ore dressing	7	5	...	6	...	12	...	389	1	412	1	413
Stoves and ovens...	15	17	3	71	2	101	4	606	11	795	20	815
Tinsmithing	26	108	27	161	82	215	104	637	136	1,121	349	1,470
Wire-working	26	44	...	267	...	340	...	1,517	...	2,168	...	2,168
Other metal works	82	110	6	169	16	229	13	1,092	14	1,600	49	1,649
Plumbing	27	6	...	26	...	35	...	295	...	362	...	362
Farriery	30	3	...	7	...	7	...	68	...	85	...	85
Total, Class 5	961	917	57	2,279	148	2,847	170	23,215	214	29,258	589	29,847
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(a) Animal Food.												
Bacon	16	...	...	8	...	16	...	194	...	218	...	218
Butchers' smallgoods	986	7	...	39	1	43	1	1,272	1	1,361	3	1,364
Margarine	3	4	...	14	...	37	...	123	...	178	...	178
Meat-preserving	6	3	4	8	8	3	11	182	28	196	51	247
Total	1,011	14	4	69	9	99	12	1,771	29	1,953	54	2,007

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total
CLASS 6.—CONNECTED WITH FOOD AND DRINK AND THE PREPARATION THEREOF—*continued.*												
(b) Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.												
Biscuits	8	198	217	108	223	73	231	289	285	668	956	1,624
Bread and pastry	1,464	72	11	375	44	407	50	2,922	177	3,776	282	4,058
Confectionery	187	113	244	136	392	182	511	806	418	1,237	1,565	2,802
Corn-flour and oatmeal	19	28	31	26	49	47	81	280	57	381	218	599
Flour-milling	63	3	...	26	...	83	5	741	1	853	6	859
Jam and fruit preserving	31	8	8	11	29	52	19	234	134	305	190	495
Pickles, sauces, and vinegar	8	...	5	3	10	24	24	36	61	63	100	163
Poultry foods and dog biscuits	9	2	1	5	...	14	1	116	...	137	2	139
Self-raising flour	5	2	7	4	13	3	16	22	16	31	52	83
Sugar-refining	4	1	...	13	2	23	4	707	20	744	26	770
Total	1,798	427	524	707	762	908	942	6,153	1,169	8,195	3,397	11,592
(c) Drinks and Stimulants.												
Aerated waters and cordials	179	27	7	159	21	139	23	562	27	878	78	956
Brewing	20	...	...	8	...	44	3	975	1	1,027	4	1,031
Condiments, coffee, spices, &c.	39	23	57	18	113	28	141	211	188	280	499	779
Distillery	1	...	...	...	...	...	...	51	...	51	...	51
Ice and refrigerating	240	25	...	69	...	56	7	1,001	3	1,151	10	1,161
Tea blending and packing	16	30	14	25	32	21	54	93	73	169	173	342
Wine, spirits, and beer bottling	59	6	5	21	4	48	15	414	58	489	82	571
Total	554	111	83	291	170	336	243	3,307	350	4,045	846	4,891
(d) Narcotics.												
Tobacco, cigars, and cigarettes	10	49	117	76	225	108	305	648	616	881	1,263	2,144
Total, Class 6	3,373	601	728	1,143	1,166	1,451	1,502	11,879	2,164	15,074	5,560	20,634
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(a) Textile.												
Woollen mills	23	159	204	129	305	124	455	905	916	1,317	1,880	3,197
(b) Dress.												
Boots and shoes:—Order made	583	28	8	65	12	82	10	952	33	1,127	63	1,190
Factory made	100	161	340	171	312	230	342	1,993	1,169	2,555	2,163	4,718
Clothing:—Men's slops	87	21	358	40	521	74	683	516	1,658	651	3,220	3,871
Women's slops	149	11	330	17	422	18	574	138	1,421	184	2,747	2,931
Tailoring	369	17	189	41	428	86	595	1,137	1,866	1,281	3,078	4,359
Corsets	9	3	89	...	126	4	207	15	232	22	654	676
Dressmaking and millinery:—												
Makers' material	218	5	464	9	680	23	744	75	1,555	112	3,443	3,555
Customers' material	137	1	94	1	130	2	153	8	382	12	759	771
Dye works	29	10	5	15	27	28	36	137	88	190	156	346
Furriery	29	19	56	35	61	37	62	104	104	195	283	478
Hats and caps	28	53	91	50	158	80	181	315	341	498	771	1,269
Hosiery and knitting	74	53	344	117	511	120	813	412	909	702	2,577	3,279
Oilskin and waterproof clothing	8	...	2	...	12	1	17	15	55	16	86	102
Shirts, ties, and scarves	48	12	326	19	326	22	365	95	781	148	1,798	1,946
Umbrellas	8	8	12	15	25	5	34	36	60	64	131	195
Underclothing	110	5	288	17	380	32	365	89	649	143	1,682	6,825
Wigs and hair work	9	...	2	...	11	...	17	4	22	4	52	56
Total	1,995	407	2,998	612	4,142	844	5,198	6,041	11,325	7,904	23,663	31,567
(c) Fibrous Materials and Textiles not elsewhere included.												
Bags and sacks	11	15	58	19	77	11	75	85	102	130	312	442
Rope and twine	8	27	13	43	16	36	7	83	5	189	41	230
Tents and tarpaulins	16	4	4	6	8	12	21	49	71	71	104	175
Total	35	46	75	68	101	59	103	217	178	390	457	847
Total, Class 7	2,053	612	3,277	809	4,548	1,027	5,756	7,163	12,419	9,611	26,000	35,611
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	23	19	2	31	6	34	8	123	14	207	30	237
Electrotyping and stereotyping, type founding, and printers' materials	17	5	4	10	9	20	8	80	8	115	29	144
Paper bags and boxes	13	39	134	56	175	46	176	151	277	292	762	1,054
Paper mills, cardboard, and strawboard	7	8	5	25	33	41	40	296	85	370	163	533
Photo.-engraving, photo.-lithography, and photo. materials	56	3	30	25	72	28	97	136	232	192	431	623
Printing, bookbinding, and manufacturing stationery	530	324	270	598	414	818	488	4,673	804	6,413	1,976	8,389
Total, Class 8	655	398	445	745	709	987	817	5,459	1,420	7,589	3,391	10,980
CLASS 9.—MUSICAL INSTRUMENTS, &C.												
Pianos, organs, and sewing-machines	30	29	3	79	16	113	45	587	67	808	131	939

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
Class 10.—Arms and Explosives.												
Explosives	5	2	...	...	2	3	1	14	2	19	5	24
Class 11.—Vehicles and Fittings, Saddlery, Harness, &c.												
Coaches and waggons	211	25	...	128	...	119	1	905	...	1,177	1	1,178
Cycles and motor cars	867	263	7	800	8	915	8	4,239	44	6,217	67	6,284
Perambulators, &c.	6	13	...	13	1	19	2	108	3	153	6	159
Saddlery, harness, &c.	41	12	2	12	...	27	4	214	13	265	19	284
Naves, spokes, &c.	9	3	...	3	...	12	...	71	...	89	...	89
Whips	3	...	...	1	...	...	...	11	...	12	...	12
Total, Class 11	1,137	316	9	957	9	1,092	15	5,548	60	7,913	93	8,006
Class 12.—Shipbuilding, Fittings, &c.												
Docks and slips	4	8	...	22	...	13	...	159	...	202	...	202
Sailmaking	4	...	...	...	...	1	...	11	3	12	3	15
Ship and boat building	25	11	...	44	...	66	...	632	...	753	...	753
Total, Class 12	33	19	...	66	...	80	...	802	3	967	3	970
Class 13.—Furniture, Bedding, &c.												
Bedding, flock, and upholstery	69	34	39	98	55	90	92	480	228	702	414	1,116
Carpet-sewing	3	...	2	1	6	5	8	54	46	60	62	122
Iron bedsteads	4	24	...	19	...	34	...	231	...	308	...	308
Billiard tables	1	...	...	1	...	11	...	95	40	107	40	147
Chair-making	17	15	...	34	...	39	...	215	1	303	1	304
Furniture and cabinet making—												
European	249	115	1	358	1	506	3	2,191	12	3,170	17	3,187
Chinese	28	2	...	2	...	...	...	273	...	277	...	277
Bamboo and wicker	18	6	...	19	...	22	...	158	1	205	1	206
Picture frames	25	4	4	25	10	18	8	106	47	153	69	222
Window blinds	9	10	2	7	3	9	2	51	14	77	21	98
Total, Class 13	423	210	48	564	75	734	113	3,854	389	5,362	625	5,987
Class 14.—Drugs, Chemicals, and By-products.												
Baking powder, blue, soda, &c.	23	15	35	20	66	15	77	109	69	159	247	406
Chemical works and drugs	69	60	95	78	112	81	141	504	225	723	573	1,296
Fertilisers	4	...	...	2	...	2	...	67	...	71	...	71
Perfumes and essences	15	5	7	10	27	16	35	43	23	74	92	166
Paints and varnishes	22	67	6	56	11	66	14	419	31	608	62	670
Other Minor Works	5	...	...	1	2	4	2	23	2	28	6	34
Total, Class 14	138	147	143	167	218	184	269	1,165	350	1,663	980	2,643
Class 15.—Surgical and Scientific Appliances.												
Optical instruments	35	10	...	26	8	23	6	110	5	169	19	188
Surgical instruments	4	1	...	1	...	2	1	23	5	27	6	33
Other Minor Works	5	1	...	2	1	2	...	7	1	12	2	14
Total, Class 15	44	12	...	29	9	27	7	140	11	208	27	235
Class 16.—Timepieces, Jewellery, and Platedware.												
Electroplating	37	12	3	26	2	35	3	160	3	233	11	244
Jewellery	76	17	14	38	29	66	28	428	62	549	133	682
Total, Class 16	113	39	17	64	31	101	31	588	65	782	144	926
Class 17.—Light, Heat, and Power.												
Electrical apparatus	110	110	15	364	65	400	73	1,380	72	2,254	225	2,479
Electric light and power works*	303	9	...	22	...	32	2	1,000	1	1,063	3	1,066
Gas works	42	8	...	14	...	35	...	1,305	...	1,362	...	1,362
Lamps and gas mantles	6	2	1	13	31	10	30	38	27	63	89	152
Hydraulic power	...	...	...	...	...	...	...	...	...	...	...	...
Coke works	11	7	...	6	...	12	...	249	...	274	...	274
Total, Class 17	477	136	16	419	96	489	105	3,972	100	5,016	317	5,333
Class 18.—Leatherware (excepting Harness and Saddlery).												
Fancy Leather	18	9	78	23	131	13	102	86	104	131	415	546
Leather belting	6	10	...	7	...	6	...	49	...	72	...	72
Portmanteaux	14	28	21	37	26	24	26	152	43	241	116	357
Other Minor Works	22	25	26	26	51	26	40	111	50	188	167	355
Total, Class 18	60	72	125	93	208	69	168	398	197	632	698	1,330
Class 19.—Minor Wares not elsewhere included.												
Baskets, wickerware, mats, matting	4	...	...	2	2	8	...	36	10	46	12	58
Brooms, brushes	32	29	14	35	30	31	26	203	20	298	90	388
Florists and seedsmen	6	3	13	3	5	1	1	19	3	26	22	48
Laundries—European†	162	5	72	6	234	31	285	267	1,122	309	1,713	2,022
Chinese	26	...	...	...	...	...	...	28	3	28	3	31
Rubber goods	9	56	46	54	91	102	150	804	501	1,016	788	1,804
Toys	22	8	6	36	7	29	17	58	7	131	37	168
Painting and sign-writing	15	10	...	20	5	32	3	537	9	599	17	616
Other Minor Works	40	25	45	46	71	39	51	219	135	329	302	331
Total, Class 19	316	136	196	202	445	273	533	2,171	1,810	2,782	2,984	5,766
Total, All Industries	11,829	4,250	5,095	8,956	7,781	11,274	9,681	85,160	19,415	109,650	41,972	151,622

*Including 243 electric lighting plants for picture shows, employing 275 persons.

†Charitable institutions doing outside laundry work are included in the number of factories registered.

Appendix II.

Factories, by Number of Persons employed—1922–1926.

Year.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																	
1922	2,912	1,648	776	342	206	161	103	49	73	34	32	8	7	10	3	3	6,367
1923	3,147	1,647	763	347	171	198	90	44	66	37	25	14	3	8	5	3	6,573
1924	3,246	1,756	822	349	187	197	96	48	61	43	29	11	6	9	4	4	6,868
1925	3,310	1,738	828	353	187	198	106	59	73	32	29	8	8	8	5	5	6,947
1926	2,970	1,841	851	383	217	219	123	58	82	31	32	9	7	7	4	3	6,837
Newcastle District.																	
1922	676	269	86	28	15	9	5	...	5	2	4	...	...	...	1	...	1,100
1923	836	185	83	32	9	7	4	3	5	3	2	...	...	...	1	1	1,171
1924	758	300	77	39	6	14	2	3	3	4	1	1	1	1	...	1	1,211
1925	784	295	95	29	15	10	4	3	3	1	1	2	...	1	1	1	1,245
1926	755	298	100	23	18	7	7	1	2	2	...	1	2	...	...	1	1,217
Rest of State.																	
1922	2,294	680	176	26	12	7	4	1	3	3	...	...	1	...	...	...	3,207
1923	2,587	475	183	31	14	4	3	2	6	1	2	...	...	2	1	...	3,314
1924	2,415	816	184	30	9	10	4	1	4	2	1	1	...	3	...	...	3,480
1925	2,616	786	177	33	9	6	4	2	3	2	2	1	...	2	1	...	3,644
1926	2,618	882	207	34	10	6	5	3	3	2	3	1	...	...	1	...	3,775
State.																	
1922	5,882	2,597	1,038	396	233	177	112	50	81	39	36	8	8	10	4	3	10,674
1923	6,570	2,307	1,034	413	194	209	97	49	77	41	29	14	3	10	7	4	11,058
1924	6,419	2,872	1,083	418	202	221	102	52	68	49	31	13	7	13	4	5	11,559
1925	6,710	2,819	1,100	415	211	214	114	64	79	35	32	11	8	11	7	6	11,836
1926	6,343	3,021	1,158	440	245	232	135	62	87	35	35	11	9	7	5	4	11,829

Appendix III.

Factories, by Class and Number of Persons employed, 1926.

Class of Factory.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																	
I. Treating raw material, product of pastoral pursuits	46	31	18	5	1	7	3	2	2	2	1	...	...	...	...	...	118
II. Oils and fats—animal, vegetable, &c.	5	5	1	2	2	3	2	1	...	...	1	...	...	...	...	...	20
III. Processes relating to stone, clay, glass, &c. ...	43	63	41	29	25	18	13	2	3	...	3	1	...	1	...	...	242
IV. Working in wood	194	154	49	15	7	14	2	4	4	1	1	...	...	...	...	...	445
V. Metal works, machinery, &c.	264	227	109	44	38	21	23	7	17	5	4	1	1	...	1	1	763
VI. Connected with food and drink, &c.	965	265	86	38	19	16	13	6	10	2	3	2	3	2	1	1	1,432
VII. Clothing and textile fabrics, &c.	699	402	217	116	65	64	42	10	26	8	10	2	2	4	1	...	1,668
VIII. Books, paper, printing, engraving, &c.	123	138	73	41	18	24	7	6	6	5	4	1	...	...	...	...	446
IX. Musical instruments, &c.	7	6	7	3	...	3	...	1	1	...	...	1	...	...	...	...	29
X. Arms and explosives	1	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XI. Vehicles and fittings, saddlery, harness, &c. ...	225	170	55	12	11	17	3	8	1	1	1	1	...	...	...	...	505
XII. Ship and boat building, &c.	9	4	3	3	1	2	...	...	...	1	2	...	...	...	...	...	25
XIII. Furniture, bedding, &c.	99	128	62	31	11	9	4	5	5	1	...	...	...	...	...	...	355
XIV. Drugs, chemicals, and by-products	34	57	12	9	...	7	1	3	2	1	2	...	...	...	...	...	128
XV. Surgical and other scientific instruments	23	10	5	2	...	...	...	...	...	...	...	...	...	...	...	...	40
XVI. Jewellery and plated-ware, &c.	56	31	15	2	1	...	1	...	...	...	...	...	...	...	...	...	106
XVII. Heat, light and power	89	34	25	7	4	5	5	2	3	1	...	...	1	...	1	...	177
XVIII. Leatherware (excepting saddlery and harness) ...	12	19	13	5	6	1	1	...	1	2	...	...	...	...	...	...	60
XIX. Minor wares not elsewhere included	78	93	60	19	8	8	3	1	1	1	...	...	...	...	...	1	273
Total	2,970	1,841	851	383	217	219	123	58	82	31	32	9	7	7	4	3	6,837
Newcastle District.																	
I. Treating raw material, product of pastoral pursuits	14	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	15
II. Oils and fats—animal, vegetable, &c.	...	3	...	...	...	...	...	...	...	1	...	...	...	...	...	...	4
III. Processes relating to stone, clay, glass, &c. ...	19	16	11	2	5	...	...	...	...	...	...	...	...	...	...	...	53
IV. Working in wood	119	50	31	3	...	2	...	...	...	...	...	...	...	...	...	...	205
V. Metal work, machinery, &c.	38	23	12	2	2	2	3	...	1	...	...	1	2	...	...	1	87
VI. Connected with food and drink, &c.	351	64	15	7	3	1	...	...	1	...	...	...	...	...	...	...	442
VII. Clothing and textile fabrics, &c.	63	44	12	6	4	...	2	1	...	...	...	...	...	...	...	...	132
VIII. Books, paper, printing, engraving, &c.	12	22	3	...	2	1	...	...	...	...	...	...	...	...	...	...	40
IX. Musical instruments, &c.	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XI. Vehicles and fittings, saddlery, harness, &c. ...	63	44	5	...	...	1	...	...	...	...	...	...	...	...	...	...	113
XII. Ship and boat building, &c.	3	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	7
XIII. Furniture, bedding, &c.	12	14	3	1	...	...	1	...	...	...	...	...	...	...	...	...	31
XIV. Drugs, chemicals, and by-products	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XV. Surgical and other scientific instruments	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XVI. Jewellery and plated-ware, &c.	1	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XVII. Heat, light and power	50	8	1	2	1	...	1	...	...	...	...	...	...	...	...	...	63
XIX. Minor wares, n.e.i.	5	3	4	...	1	...	...	...	...	...	...	...	...	...	...	...	13
Total	755	298	100	23	18	7	7	1	2	2	...	1	2	...	...	1	1,217

Appendix III—*continued.*

Class of Factory.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Rest of State.																	
I. Treating raw material, product of pastoral pursuits	75	43	9	...	...	...	...	...	...	...	...	...	...	...	...	...	127
II. Oils and fats—animal, vegetable, &c.	7	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
III. Processes relating to stone, clay, glass, &c. ...	40	40	18	3	2	4	1	...	...	1	1	...	...	...	...	...	110
IV. Working in wood	421	163	64	9	4	1	1	...	...	...	...	...	...	...	...	...	663
V. Metal work, machinery, &c.	55	43	5	3	...	...	1	...	...	1	1	1	...	...	1	...	111
VI. Connected with food and drink, &c.	1,317	136	37	6	...	...	...	1	2	...	...	...	...	...	...	...	1,499
VII. Clothing and textile fabrics, &c.	111	119	15	1	1	...	2	2	1	...	1	...	...	...	...	...	253
VIII. Books, paper, printing, engraving, &c.	74	78	12	4	...	1	...	...	...	...	...	...	...	...	...	...	169
XI. Vehicles and fittings, saddlery, harness, &c. ...	301	193	24	1	...	...	...	...	...	...	...	...	...	...	...	...	519
XII. Ship and boat building, &c.	....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XIII. Furniture, bedding, &c.	24	11	2	...	...	...	...	...	...	...	...	...	...	...	...	...	37
XIV. Drugs, chemicals, and by-products	5	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	7
XV. Surgical and other scientific instruments	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XVI. Jewellery and plated-ware, &c.	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
XVII. Heat, light and power	173	46	11	4	3	...	...	...	...	...	...	...	...	...	...	...	237
XIX. Minor wares, n.e.i.	13	6	9	2	...	...	...	...	...	...	...	...	...	...	...	...	30
Total	2,618	882	207	34	10	6	5	3	3	2	3	1	...	...	1	...	3,775
State.																	
I. Treating raw materials, product of pastoral pursuits	135	74	27	5	1	7	3	2	2	3	1	...	...	...	...	...	260
II. Oils and fats—animal, vegetable, &c.	10	10	1	2	2	3	2	1	...	1	1	...	...	...	...	...	33
III. Processes in stone, clay, glass, &c.	102	119	70	34	32	22	14	2	3	1	4	1	...	1	...	...	405
IV. Working in wood	734	367	144	27	11	17	3	4	4	1	1	...	...	...	...	...	1,313
V. Metal works, machinery, &c.	357	293	126	49	40	23	27	7	18	6	5	3	3	2	2	...	961
VI. Connected with food and drink, &c.	2,633	465	138	51	22	17	13	7	13	2	3	2	3	2	1	2	3,373
VII. Clothing and textile fabrics, &c.	873	565	244	123	70	64	46	13	27	8	11	2	2	4	1	1	2,053
VIII. Books, paper, printing, and engraving, &c. ...	209	238	88	45	20	26	7	6	6	5	4	1	...	...	...	...	655
IX. Musical instruments, &c.	7	6	8	3	...	3	...	1	1	...	...	1	...	...	...	...	30
X. Arms and explosives	1	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XI. Vehicles and fittings, saddlery and harness, &c. ...	589	407	84	13	11	18	3	8	1	1	1	1	...	...	...	...	1,137
XII. Ship and boat building, &c.	12	8	4	3	1	2	...	...	...	1	2	...	...	...	...	...	33
XIII. Furniture, bedding, &c.	135	153	67	32	11	9	5	5	5	1	...	...	...	...	...	...	423
XIV. Drugs, chemicals, and by-products	41	57	14	10	...	7	1	3	2	1	2	...	...	...	...	...	138
XV. Surgical and other scientific instruments	27	10	5	2	...	...	...	...	...	...	...	...	...	...	...	...	44
XVI. Jewellery and plated-ware, &c.	58	36	15	2	1	...	1	...	...	...	...	...	...	...	...	...	113
XVII. Heat, light, and power	312	88	37	13	8	5	6	2	3	1	...	...	1	...	1	...	477
XVIII. Leatherware, n.e.i.	12	19	13	5	6	1	1	...	1	2	...	...	...	...	...	...	60
XIX. Minor wares, n.o.i.	96	102	73	21	9	8	3	1	1	1	...	...	...	...	...	1	316
Total	6,343	3,021	1,158	440	245	232	135	62	87	35	35	11	9	7	5	4	11,829

Appendix IV.

Persons employed, by Class of Factory, Classified by Industry—1926.

Metropolitan District.

Class of Factory.	Number of Factories on Register.	Persons employed.								
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Class 1.—Treating Raw Material, the Product of Pastoral Pursuits.												
(a) *Animal Products.*												
Boiling-down and tallow-refining	8	1	...	...	...	3	...	107	...	111	...	111
Glue	2	...	4	3	22	6	23	128	19	137	68	205
Tanning	63	31	1	57	4	56	5	928	2	1,072	12	1,084
Wool-scouring and fellmongering	19	6	...	22	...	46	...	629	...	703	...	703
Other animal products	2	17	...	12	...	4	...	46	...	79	...	79
Total	94	55	5	94	26	115	28	1,828	21	2,102	80	2,182
(b) *Vegetable Products.*												
Chaff-cutting	24	...	...	...	...	...	...	49	...	49	...	49
Total, Class 1	118	55	5	94	26	115	28	1,887	21	2,151	80	2,231
Class 2.—Oils and Fats—Animal and Vegetable.												
Oil and grease	7	14	...	6	...	9	...	186	...	215	...	215
Soap, candles, &c.	13	19	18	19	39	37	64	295	64	370	185	555
Total, Class 2	20	33	18	25	39	46	64	481	64	585	185	770

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.												
Asphalt	9	1	...	4	...	8	...	86	...	99	...	99
Bricks and tiles	67	105	...	195	...	210	...	2,308	...	2,818	...	2,818
Glass and glass bottles	7	41	...	74	8	80	14	844	1	1,039	23	1,062
Glass (ornamental)	31	38	...	36	3	68	8	329	9	491	20	511
Lime, plaster, and cement	8	2	...	...	...	7	...	31	...	40	...	40
Marble and slate	15	...	...	11	...	14	...	204	...	229	...	229
Modelling and fibrous plaster	24	12	...	11	...	25	...	168	...	216	...	216
Monumental masonry	21	4	...	12	...	10	...	176	...	202	...	202
Pottery and earthenware	14	83	...	72	1	74	3	516	19	745	23	768
Stone-dressing	21	1	...	5	...	13	...	310	...	329	...	329
Other works	25	2	...	17	...	38	...	426	...	483	...	483
Total, Class 3	242	289	...	457	12	547	25	5,398	29	6691	66	6,757
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	...	...	...	...	...	...	...	...	...	...	...	...
Boxes and packing-cases	49	20	...	48	...	91	6	673	5	832	11	843
Cooperage	9	8	...	13	...	20	...	216	...	257	...	257
Joinery	214	60	...	238	...	295	...	2,088	...	2,681	...	2,681
Saw-milling—Timber	68	29	...	95	...	111	1	1,068	1	1,303	2	1,305
Firewood	51	2	...	3	...	4	...	121	...	130	...	130
Wood-turning	25	12	...	6	...	14	3	106	4	138	7	145
Other works	32	22	...	26	8	66	8	256	3	370	19	389
Total, Class 4	445	153	...	429	8	601	18	4,528	13	5,711	39	5,750
CLASS 5.—METAL WORKS, MACHINERY, &c.												
Agricultural implements	11	8	...	13	...	42	...	235	...	298	...	298
Brass and copper	82	55	6	130	21	146	5	659	10	990	42	1,032
Cutlery	28	1	3	10	7	13	2	97	...	121	12	133
Engineering	215	250	12	576	9	783	32	5,779	28	7,388	81	7,469
Galvanised iron	49	60	...	109	6	108	2	612	...	889	8	897
Iron works, foundries, and boilermaking	121	126	...	308	4	405	5	4,334	12	5,173	21	5,194
Iron safes and doors	5	6	...	10	...	14	...	112	...	142	...	142
Lead-mills	3	...	...	4	...	16	...	34	...	54	...	54
Railway carriage works	1	48	...	50	1	37	3	152	2	287	6	293
Smelting and ore dressing	4	5	...	5	...	12	...	151	1	173	1	174
Stoves and ovens	13	17	3	64	2	98	4	583	11	762	20	782
Tinsmithing	20	101	27	158	82	211	104	612	136	1,082	349	1,431
Wire-working	22	33	...	156	...	188	...	871	...	1,248	...	1,248
Other metal works	79	95	6	145	16	201	13	1,072	14	1,513	49	1,562
Plumbing	16	3	...	15	...	25	...	219	...	262	...	262
Farriery	22	1	...	5	...	2	...	49	...	57	...	57
Total, Class 5	763	809	57	1,758	148	2,301	170	15,571	214	20,439	589	21,028
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(a) *Animal Food.*												
Bacon	10	...	...	5	...	15	...	149	...	169	...	169
Butchers' smallgoods	487	4	...	23	...	33	1	670	1	730	2	732
Margarine	3	4	...	14	...	37	...	123	...	178	...	178
Meat-preserving	4	3	4	8	8	3	11	176	28	190	51	241
Total	504	11	4	50	8	88	12	1,118	29	1,267	53	1,320
(b) *Vegetable Foods, including Products not Food but usually connected with the manufacture of Foods.*												
Biscuits	7	193	217	103	220	72	230	282	283	650	950	1,600
Bread and pastry	504	38	10	209	34	252	39	1,592	116	2,091	199	2,290
Confectionery	131	105	239	125	379	170	494	735	409	1,135	1,521	2,656
Corn-flour and oatmeal	16	24	27	23	40	36	43	211	35	294	145	439
Flour-milling	19	...	...	8	...	36	5	370	1	414	6	420
Jam and fruit preserving	6	8	8	9	29	48	19	216	134	281	190	471
Pickles, sauces, and vinegar	7	...	5	3	10	24	24	36	61	63	100	163
Poultry foods and dog biscuits	9	2	1	5	...	14	1	116	...	137	2	139
Self-raising flour	5	2	7	4	13	3	16	22	16	31	52	83
Sugar-refining	1	...	...	11	2	13	4	364	20	388	26	414
Total	705	372	514	500	727	668	875	3,944	1,075	5,484	3,191	8,675
(c) *Drinks and Stimulants.*												
Aerated waters and cordials	29	5	...	61	16	74	21	242	23	382	60	442
Brewing	9	...	...	7	...	32	3	875	1	914	4	918
Condiments, coffee, spices, &c.	35	20	43	16	99	28	136	203	188	267	466	733
Distillery	1	...	...	...	...	...	...	51	...	51	...	51
Ice and refrigorating	91	15	...	32	...	35	7	486	3	568	10	578
Tea blending and packing	16	30	14	25	32	21	54	93	73	169	173	342
Wine, spirits, and beer bottling	25	1	1	17	4	44	13	312	55	374	73	447
Total	206	71	58	158	151	234	234	2,262	343	2,725	786	3,511
(d) *Narcotics.*												
Tobacco, cigars, and cigarettes	10	49	117	76	225	108	305	648	616	881	1,263	2,144
Total, Class 6	1,432	503	693	784	1,111	1,098	1,426	7,972	2,063	10,357	5,293	15,650

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males	Females.	Males.	Females.	Total.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(a) *Textile.*												
Woollen mills	18	127	142	98	236	109	370	811	803	1,145	1,551	2,696
(b) *Dress.*												
Boots and shoes—Order made	467	17	8	40	10	52	9	732	27	841	54	895
Factory made	91	157	340	165	306	221	332	1,935	1,154	2,478	2,132	4,610
Clothing—Men's slops	80	19	307	37	476	73	609	504	1,577	633	2,969	3,602
Women's slops	148	11	330	17	422	18	574	138	1,421	184	2,747	2,931
Tailoring	193	13	157	25	309	55	404	710	1,481	803	2,351	3,154
Corsets	8	3	89	...	124	4	207	14	229	21	649	670
Dressmaking and millinery—												
Makers' material	193	5	439	9	651	23	716	71	1,486	108	3,292	3,400
Customers' material	113	1	84	1	104	2	127	7	336	11	651	662
Dye works	24	9	3	12	18	26	27	130	84	177	132	309
Furriery	29	19	56	35	61	37	62	104	104	195	283	478
Hats and caps	28	53	91	50	158	80	181	315	341	498	771	1,269
Hosiery and knitting	70	53	341	117	509	119	807	409	903	698	2,560	3,258
Oilskin and waterproof clothing	8	...	2	...	12	1	17	15	55	16	86	102
Shirts, ties, and scarves	45	12	309	19	314	20	344	92	760	143	1,727	1,870
Umbrellas	7	8	12	15	24	5	34	36	59	64	129	193
Underclothing	108	4	265	15	353	28	346	77	632	124	1,596	1,720
Wigs and hair work	8	...	2	...	8	...	16	4	18	4	44	48
Total	1,638	511	2,977	655	4,095	873	5,182	6,104	11,470	8,143	23,724	31,867
(c) *Fibrous Materials and Textiles not elsewhere included.*												
Bags and sacks	8	14	58	17	77	11	75	74	102	116	312	428
Rope and twine	8	27	13	43	16	36	7	83	5	189	41	230
Tents and tarpaulins	14	4	4	5	8	11	20	46	71	66	103	169
Total	30	45	75	65	101	58	102	203	118	371	456	827
Total, Class 7 ...	1,668	556	3,052	720	4,196	931	5,284	6,307	11,648	8,514	24,180	32,694
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	22	18	2	30	6	34	8	122	14	204	30	234
Electrotyping and stereotyping, type founding, and printers' materials	17	5	4	10	9	20	8	80	8	115	29	144
Paper bags and boxes	12	39	131	56	174	46	174	150	276	291	755	1,046
Paper mills, cardboard, and strawboard ...	7	8	5	25	33	41	40	296	85	370	163	533
Photo-engraving, photo-lithography, and photo. materials	49	3	26	24	68	28	89	129	221	184	404	588
Printing, bookbinding, and manufacturing stationery	339	258	268	469	394	675	458	3,927	778	5,329	1,898	7,227
Total, Class 8	446	331	436	614	684	844	777	4,704	1,382	6,493	3,279	9,772
CLASS 9.—MUSICAL INSTRUMENTS, &c.												
Pianos, organs, and sewing machines ...	29	29	3	78	16	112	45	579	67	798	131	929
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	5	2	...	...	2	3	1	14	2	19	5	24
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY, HARNESS, &c.												
Coaches and waggons	63	12	...	74	...	57	1	402	...	545	1	546
Cycles and motor cars	412	164	7	552	7	656	7	3,148	44	4,520	65	4,585
Perambulators, &c.	6	13	...	13	1	19	2	108	3	153	6	159
Saddlery, harness, &c.	21	5	2	6	...	16	4	133	13	160	19	179
Naves, spokes, &c.	1	...	...	...	...	6	...	42	...	48	...	48
Whips	2	...	...	1	...	...	...	10	...	11	...	11
Total, Class 11	505	194	9	646	8	754	14	3,843	60	5,437	91	5,528
CLASS 12.—SHIPBUILDING FITTINGS, &c.												
Docks and slips	3	6	...	21	...	10	...	151	...	188	...	188
Sailmaking	3	...	...	...	...	1	...	10	3	11	3	14
Ship and boat building	19	10	...	43	...	65	...	596	...	714	...	714
Total, Class 12	25	16	...	64	...	76	...	757	3	913	3	916

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 13.—FURNITURE, BEDDING, &c.												
Bedding, flock, and upholstery	60	32	39	91	54	83	90	461	225	667	408	1,075
Carpet-sewing	3	...	2	1	6	5	8	54	46	60	62	122
Iron bedsteads	4	24	...	19	...	34	...	231	...	308	...	308
Billiard tables	1	...	...	1	...	11	...	95	40	107	40	147
Chair-making	16	15	...	33	...	39	...	213	1	300	1	301
Furniture and cabinet-making—												
European	194	104	...	317	...	438	1	1,961	9	2,820	10	2,830
Chinese	27	2	...	2	...	...	...	270	...	274	...	274
Bamboo and wicker	17	6	...	19	...	20	...	155	1	200	1	201
Picture frames	25	4	4	25	10	18	8	106	47	153	69	222
Window blinds	8	10	2	7	3	8	2	50	14	75	21	96
Total, Class 13	355	197	47	515	73	656	109	3,596	383	4,964	612	5,576
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c.	23	15	35	20	66	15	77	109	69	159	247	406
Chemical works and drugs	64	57	95	71	112	68	138	454	225	650	570	1,220
Fertilisers	2	...	...	1	...	...	...	39	...	40	...	40
Perfumes and essences	14	5	7	10	27	13	35	36	23	64	92	156
Paints and varnishes	20	67	6	56	11	65	14	417	31	605	62	667
Other minor works	5	...	...	1	2	4	2	23	2	28	6	34
Total, Class 14	128	144	143	159	218	165	266	1,078	350	1,546	977	2,523
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	31	10	...	25	7	23	6	105	5	163	18	181
Surgical instruments	4	1	...	1	...	2	1	23	5	27	6	33
Other minor works	5	1	...	2	1	2	...	7	1	12	2	14
Total, Class 15	40	12	...	28	8	27	7	135	11	202	26	228
CLASS 16.—TIMEPIECES, JEWELLERY, AND PLATED WARE.												
Electroplating	34	11	3	22	2	34	3	149	3	216	11	227
Jewellery	72	17	14	38	29	66	28	414	62	535	133	668
Total, Class 16	106	28	17	60	31	100	31	563	65	751	144	895
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	103	104	15	331	65	353	73	1,150	72	1,038	225	2,163
Electric light and power works*	57	1	...	1	...	4	...	497	...	503	...	503
Gas works	8	7	...	12	...	28	...	984	...	1,031	...	1,031
Lamps and gas mantles	6	2	1	13	31	10	30	38	27	63	89	152
Hydraulic power	...	...	...	...	...	...	...	...	...	...	...	...
Coke works	3	2	...	...	...	4	...	88	...	94	...	94
Total, Class 17	177	116	16	357	96	399	103	2,757	99	3,629	314	3,943
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy leather	18	9	78	23	131	13	102	86	104	131	415	546
Leather belting	6	10	...	7	...	6	...	49	...	72	...	72
Portmanteaux	14	28	21	37	26	24	26	152	43	241	116	357
Other minor works	22	25	26	26	51	26	40	111	50	188	167	355
Total, Class 18	60	72	125	93	208	69	168	398	197	632	698	1,330
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting	4	...	...	2	2	8	...	36	10	46	12	58
Brooms, brushes	28	29	14	35	27	31	21	192	19	287	81	368
Florists and seedsmen	5	3	13	3	5	1	1	18	3	25	22	47
Laundries—European †	137	5	56	6	176	21	228	239	1,034	271	1,494	1,765
Chinese	20	...	...	...	...	...	...	23	...	23	...	23
Rubber goods	7	55	46	53	91	101	150	799	501	1,008	788	1,796
Toys	20	8	6	36	7	29	17	56	7	129	37	166
Painting and signwriting	14	10	...	20	5	32	3	537	9	599	17	616
Other minor works	38	17	45	40	71	35	51	206	135	298	302	600
Total, Class 19	273	127	180	195	384	258	471	2,106	1,718	2,686	2,753	5,439
Total, All Industries	6,837	3,666	4,801	7,076	7,268	9,102	9,007	62,674	18,389	82,518	39,465	121,983

* These figures include 58 electric lighting plants for picture shows, employing 59 persons.

† Charitable institutions doing outside laundry work are now included in the number of factories registered.

Appendix V.

Persons employed, by Class of Factory—1922–26.

Class of Factory.	1922.	1923.	1924.	1925.	1926.
Metropolitan District.					
I. Treating raw material, product of pastoral pursuits	2,390	2,246	1,959	2,068	2,231
II. Oils and fats—animal, vegetable, &c.	862	764	696	616	770
III. Processes relating to stone, clay, glass, &c.	5,500	5,768	5,801	6,272	6,757
IV. Working in wood	4,819	5,098	5,063	5,046	5,750
V. Metal works, machinery, &c.	14,684	16,611	17,445	18,154	21,028
VI. Connected with food and drink, &c.	14,437	13,857	14,731	14,416	15,650
VII. Clothing and textile fabrics, &c.	28,585	27,393	27,600	29,207	32,694
VIII. Books, paper, printing, engraving, &c.	8,001	8,608	8,914	9,107	9,772
IX. Musical instruments, &c.	638	686	678	695	929
X. Arms and explosives	22	32	31	23	24
XI. Vehicles and fittings, saddlery, harness, &c.	4,051	4,602	4,457	4,950	5,528
XII. Ship and boat building, &c.	1,150	1,760	1,073	960	916
XIII. Furniture, bedding, &c.	4,498	4,731	5,035	5,238	5,576
XIV. Drugs, chemicals, and by-products	2,257	2,129	2,206	2,352	2,523
XV. Surgical and other scientific instruments	184	187	182	236	228
XVI. Jewellery and plated-ware, &c.	891	787	980	946	895
XVII. Heat, light, and power	2,557	3,120	3,475	3,527	3,943
XVIII. Leatherware (excepting saddlery and harness)	1,249	1,055	1,048	1,178	1,330
XIX. Minor wares, n.e.i.	3,965	3,922	4,399	4,833	5,439
Total	100,690	103,356	105,773	109,824	121,933
Newcastle District.					
I. Treating raw material, product of pastoral pursuits	131	165	196	175	193
II. Oils and fats—animal, vegetable, &c.	195	176	179	150	167
III. Processes relating to stone, clay, glass, &c.	382	415	480	525	564
IV. Working in wood	1,347	1,525	1,457	1,430	1,193
V. Metal works, machinery, &c.	2,490	5,738	6,209	5,927	6,379
VI. Connected with food and drink, &c.	1,273	1,294	1,361	1,354	1,549
VII. Clothing and textile fabrics, &c.	1,366	1,203	1,104	1,066	1,108
VIII. Books, paper, printing, engraving, &c.	260	324	342	351	348
IX. Musical instruments, &c.	8	7	10	11	10
XI. Vehicles and fittings, saddlery, harness, &c.	392	404	394	472	514
XII. Ship and boat building, &c.	55	62	30	47	46
XIII. Furniture, bedding, &c.	209	223	243	249	249
XIV. Drugs, chemicals, and by-products	80	88	128	124	61
XV. Surgical and other scientific instruments	5	6	4	6	6
XVI. Jewellery and plated-ware, &c.	16	16	13	10	25
XVII. Heat, light and power	263	795	800	724	505
XIX. Minor wares, n.e.i.	99	128	144	148	104
Total	8,571	12,569	13,103	12,769	13,021
Rest of State.					
I. Treating raw material, product of pastoral pursuits	381	496	386	483	471
II. Oils and fats—animal, vegetable, &c.	22	30	27	25	25
III. Processes relating to stone, clay, glass, &c.	1,329	1,795	1,699	1,785	1,342
IV. Working in wood	2,261	2,659	2,563	2,648	2,928
V. Metal work, machinery, &c.	2,150	2,648	2,467	2,491	2,440
VI. Connected with food and drink, &c.	3,024	3,021	3,499	3,498	3,435
VII. Clothing and textile fabrics, &c.	1,495	1,553	1,606	1,519	1,809
VIII. Books, paper, printing, engraving, &c.	681	738	738	741	860
XI. Vehicles and fittings, saddlery, harness, &c.	1,439	1,505	1,597	1,677	1,964
XII. Ship and boat building, &c.	.....	.....	.....	1	8
XIII. Furniture, bedding, &c.	124	156	141	152	162
XIV. Drugs, chemicals, and by-products	46	80	75	67	59
XV. Surgical and other scientific instruments	2	2	1	1	1
XVI. Jewellery and plated-ware, &c.	12	13	10	3	6
XVII. Heat, light and power	718	781	838	896	885
XIX. Minor wares, n.e.i.	132	159	193	197	223
Total	13,816	15,636	15,840	16,094	16,618
State.					
I. Treating raw material, product of pastoral pursuits	2,902	2,907	2,541	2,726	2,895
II. Oils and fats—animal, vegetable, &c.	1,079	970	902	791	962
III. Processes relating to stone, clay, glass, &c.	7,211	7,978	7,980	8,582	8,663
IV. Working in wood	8,427	9,282	9,083	9,124	9,871
V. Metal work, machinery, &c.	19,324	24,997	26,121	26,572	29,847
VI. Connected with food and drink, &c.	18,734	18,172	19,591	19,268	20,634
VII. Clothing and textile fabrics, &c.	31,446	30,149	30,310	31,792	35,611
VIII. Books, paper, printing, engraving, &c.	8,942	9,670	9,994	10,199	10,980
IX. Musical instruments, &c.	646	693	688	706	939
X. Arms and explosives	22	32	31	23	24
XI. Vehicles and fittings, saddlery, harness, &c.	5,881	6,511	6,448	7,099	8,006
XII. Ship and boat building, &c.	1,205	1,822	1,112	1,008	970
XIII. Furniture, bedding, &c.	4,831	5,110	5,419	5,639	5,987
XIV. Drugs, chemicals, and by-products	2,333	2,297	2,409	2,543	2,643
XV. Surgical and other scientific instruments	191	195	187	243	235
XVI. Jewellery and plated-ware, &c.	919	816	1,003	959	926
XVII. Heat, light, and power	3,539	4,696	5,113	5,057	5,333
XVIII. Leatherware (excepting saddlery and harness)	1,249	1,055	1,048	1,178	1,330
XIX. Minor wares, n.e.i.	4,196	4,209	4,736	5,178	5,766
Total	123,077	131,561	134,716	138,687	151,622

Appendix VI.

Persons employed, by Age Groups—1922-1926.

Metropolitan District.

Year.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		Over 21 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1922	6,367	2,574	3,859	5,456	5,924	7,244	7,542	51,614	16,477	66,838	33,802	100,690
1923	6,573	2,825	3,951	5,585	5,925	7,513	7,645	54,099	15,813	70,022	33,334	103,356
1924	6,868	2,949	3,893	6,166	6,100	7,753	7,794	54,774	16,344	71,642	34,131	105,773
1925	6,947	3,044	4,260	6,368	6,555	7,948	7,961	56,736	16,952	74,096	35,728	109,824
1926	6,837	3,666	4,801	7,076	7,268	9,102	9,007	62,674	18,389	82,518	39,465	121,983

Newcastle District.

1922	1,100	161	181	620	384	730	377	5,671	447	7,182	1,389	8,571
1923	1,171	201	143	800	287	921	342	9,427	448	11,349	1,220	12,569
1924	1,211	173	107	786	271	946	360	10,016	444	11,921	1,182	13,103
1925	1,245	201	132	830	225	979	335	9,608	459	11,618	1,151	12,769
1926	1,247	247	158	829	272	918	365	9,758	474	11,752	1,269	13,021

Rest of State.

1922	3,207	257	95	815	217	879	214	10,914	425	12,865	951	13,816
1923	3,314	253	116	957	262	1,040	225	12,505	478	14,555	1,081	15,636
1924	3,480	294	98	915	238	1,126	265	12,404	500	14,739	1,101	15,840
1925	3,644	312	94	954	197	1,188	255	12,603	491	15,057	1,037	16,094
1926	3,775	337	136	1,061	241	1,254	309	12,728	552	15,380	1,238	16,618

State.

1922	10,674	2,992	4,135	6,891	6,525	8,853	8,133	68,199	17,349	86,935	36,142	123,077
1923	11,058	3,279	4,210	7,342	6,474	9,474	8,212	75,831	16,739	95,926	35,635	131,561
1924	11,559	3,416	4,098	7,867	6,609	9,825	8,419	77,194	17,288	98,302	36,414	134,716
1925	11,836	3,557	4,486	8,152	6,977	10,115	8,551	78,947	17,902	100,771	37,916	138,687
1926	11,829	4,250	5,095	8,966	7,781	11,274	9,681	85,160	19,415	109,650	41,972	151,622

Appendix VII.

Horse-power of Machinery, by Class of Factory and Method of Production, Classified by Industry, 1926.

METROPOLITAN DISTRICT.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 1.—TREATING RAW MATERIALS, &c.									
Boiling-down and tallow refining	6	153	115	1	120	80	4	313	265
Glue	1	640	420	...	...	...	2	643	423
Tanning	20	495	290	10	343	282	46	2,168	1,750
Woolscouring and fellmongering and packing skins	10	799	517	2	23	12	19	2,571	1,429
Chaff-cutting	...	...	...	1	8	2	19	637	443
Total	37	2,087	1,342	14	494	376	90	6,332	4,310
CLASS 2.—OILS AND FATS.									
Oil and grease	6	103	84	1	12	11	6	368	265
Soap and candles	5	766	322	...	...	...	9	1,686	1,369
Total	11	869	706	1	12	11	15	2,054	1,634
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.									
Asphalt	1	12	...	...	...	...	8	142	120
Bricks and tiles	25	3,699	2,398	6	491	409	51	7,126	5,907
Glass and glass bottles	3	554	450	...	...	...	5	900	850
Glass (ornamental)	1	9	4	1	4	3	22	288	210
Cement	...	...	...	...	...	...	3	16	13
Marble and slate	...	...	...	2	46	26	14	589	503
Modelling and fibrous plaster	...	...	...	...	...	...	15	144	133
Monumental masons	1	12	8	...	...	...	5	235	216
Pottery and earthenware	4	453	324	2	46	39	8	713	595
Stone-dressing	4	297	295	2	285	220	16	879	785
Other works	3	67	55	2	364	..	19	987	698
Total	42	5,103	3,534	15	1,236	697	166	12,019	10,030
CLASS 4.—WORKING IN WOOD.									
Incubators	...	...	...	...	...	...	...	...	...
Boxes and packing-cases	2	770	670	2	3	3	48	1,140	1,020
Cooperage	...	...	...	...	...	...	7	163	148
Joinery	7	277	210	15	130	78	187	3,827	3,060
Saw-milling—timber	26	4,897	3,708	2	43	7	51	6,967	5,324
firewood	25	335	259	2	39	12	20	393	362
Wood-turning	...	...	...	1	3	1	23	243	195
Other works	1	30	30	...	...	...	30	866	798
Total	61	6,309	4,877	22	318	101	366	13,599	10,907
CLASS 5.—METAL WORKS, MACHINERY, &c.									
Agricultural implements	...	...	...	3	108	73	9	210	181
Brass and copper	1	230	230	2	7	5	72	794	664
Cutlery	...	...	...	...	...	...	28	249	198
Engineering	21	4,541	2,627	11	150	70	271	8,951	5,724
Galvanised iron	...	...	...	1	6	6	42	556	465
Iron works, foundries, and boiler-making	9	637	522	9	73	57	108	4,739	3,206
Iron safes and doors	...	...	...	...	...	...	5	198	145
Lead-mills	1	300	300	...	...	...	3	254	219
Railway carriage works	...	...	...	...	...	...	1	70	70
Smelting and ore-dressing	2	57	34	...	...	...	4	869	208
Stoves and ovens	...	...	...	1	25	15	12	1,872	1,307
Tinsmithing	...	...	...	2	110	58	20	682	545
Wire-working	...	...	...	...	...	...	20	2,546	2,474
Other metal works	...	...	...	2	97	43	74	1,808	1,269
Plumbing	...	...	...	1	3	1	6	29	22
Farriery	...	...	...	...	...	...	13	23	22
Total	34	5,765	3,713	32	579	328	688	23,850	16,719
CLASS 6.—CONNECTED WITH FOOD AND DRINK, &c.									
Bacon	4	185	145	...	...	...	9	450	422
Butchers' small-goods	5	45	42	9	46	42	447	2,228	1,984
Margarine	1	25	20	...	...	...	2	494	365
Meat-preserving	...	...	...	...	...	...	5	570	470
Biscuits	1	25	...	...	...	...	6	1,146	626
Bread and pastry	12	239	90	10	72	53	248	1,283	1,151
Confectionery	4	950	855	3	155	45	82	4,202	3,202
Corn-flour and oatmeal	2	162	112	...	...	...	15	1,347	945
Flour-milling	2	1,040	870	1	20	20	18	2,570	2,193
Jam and fruit preserving	6	79	51	...	...	...	13	323	281
Pickles, sauces, and vinegar	3	41	6	...	...	...	3	88	84
Dog biscuits and poultry foods	...	...	...	...	...	...	9	349	290
Self-raising flour	...	...	...	1	3	3	5	230	177
Sugar refining	1	179	157	...	...	...	1	4,495	4,495
Aerated waters	3	28	7	1	4	2	23	546	355
Brewing	4	2,797	1,728	1	15	10	6	3,283	2,168
Condiments, Eastern goods, &c.	3	414	364	1	36	36	29	588	561
Distillery	...	...	...	...	...	...	1	268	268
Ice and refrigerating	12	5,417	4,589	15	1,504	1,128	80	4,890	4,132
Tea-blending	2	17	13	...	...	...	12	376	354
Wines and spirits	1	43	25	1	15	...	14	68	67
Tobacco, cigars, &c.	3	1,188	830	...	...	...	6	502	166
Total	69	12,874	9,904	43	1,870	1,339	1,024	30,304	24,756

Appendix VII—continued.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
Class 7.—Clothing and Textile Fabrics, &c.									
Woollen mills	6	1,107	845	1	220	180	16	4,028	3,229
Boots and shoes—order and repairing	1	2	2	6	13	12	438	572	517
factory made	2	480	300	2	86	70	82	1,495	1,326
Clothing—men's slops	...	...	...	3	51	43	64	465	435
women's slops	...	...	...	1	4	...	132	329	295
tailoring	...	...	...	...	...	...	76	130	116
Corsets	...	...	...	...	...	...	6	113	87
Dressmaking—makers' materials	...	...	...	1	5	5	78	157	141
customers' materials	1	6	4	...	...	...	40	42	36
Dye works	10	291	221	...	...	...	18	268	248
Furriery	1	4	...	...	...	...	20	92	73
Hats and caps	4	22	18	...	...	...	26	647	550
Hosiery, knitting, &c.	5	48	24	2	8	2	63	1,212	902
Oilskins and waterproof clothing	1	6	4	...	...	...	7	21	18
Shirts, ties, and scarfs	...	...	...	1	18	...	54	239	220
Umbrellas	...	...	...	1	10	5	7	45	42
Underclothing	...	...	...	...	...	...	97	265	244
Wigs and hairwork	...	...	...	...	...	...	...	...	...
Bags and sacks	1	2	2	...	...	...	5	320	294
Rope and twine	1	125	65	1	401	401	6	285	263
Tents and tarpaulins	...	...	...	...	...	...	12	36	33
Total	33	2,093	1,585	19	816	718	1,247	10,761	9,067
Class 8.—Books, Paper, Printing, Engraving.									
Die-sinking and engraving	...	...	...	...	...	...	20	163	124
Electro and stereo-typing, printers' materials, &c.	...	...	...	...	...	...	12	199	167
Paper bags and boxes	...	...	...	1	20	14	12	437	390
Paper-mills	2	2,198	1,905	1	38	...	6	2,972	2,684
Photo.-engraving, photo. materials, &c.	1	10	10	...	...	...	14	83	64
Printing, bookbinding, and stationery	2	170	130	27	406	232	314	10,475	7,642
Total	5	2,378	2,045	29	464	246	378	14,329	11,071
Class 9.—Musical Instruments, &c.									
Pianos and sewing-machines	1	75	58	...	...	...	20	959	937
Class 10.—Arms and Explosives.									
Explosives	...	...	...	...	...	...	4	33	28
Class 11.—Vehicles, Saddlery, Harness, &c.									
Coaches and waggons	1	8	6	1	15	15	51	518	414
Cycles and motor-cars	4	108	83	14	86	56	361	2,959	2,530
Perambulators	...	...	...	...	...	...	6	27	24
Saddlery and harness	...	...	...	...	...	...	14	54	41
Naves and spokes	1	80	80	...	...	...	1	170	130
Whips	...	...	...	...	...	...	...	...	...
Total	6	196	169	15	101	71	433	3,708	3,139
Class 12.—Shipbuilding, &c.									
Docks and slips	3	2,010	2,010	...	...	...	1	1,422	1,375
Sailmaking	...	...	...	...	...	...	3	4	4
Ship and boat building	3	278	138	3	45	43	17	421	357
Total	6	2,288	2,148	3	45	43	21	1,847	1,736
Class 13.—Furniture, Bedding, &c.									
Bedding and flock	5	94	71	1	3	...	53	857	794
Carpet-sowing	...	...	...	...	...	...	6	33	32
Iron bedsteads	...	...	...	...	...	...	4	415	415
Billiard-tables	...	...	...	...	...	...	1	120	111
Chair-making	1	50	48	1	5	5	14	199	176
Furniture—European	...	...	...	4	60	46	179	3,694	3,152
Chinese	...	...	...	...	...	...	16	163	139
Bamboo and Wicker	...	...	...	...	...	...	...	...	...
Picture frames	...	...	...	...	...	...	25	123	122
Window blinds	...	...	...	...	...	...	8	23	18
Total	6	144	119	6	68	51	306	5,627	4,957
Class 14.—Drugs, Chemicals, and By-products.									
Blue, baking-powder, soda, &c.	1	12	12	...	...	...	15	693	446
Chemical works and drugs	10	224	85	3	124	100	48	1,473	1,260
Fertilisers	1	8	6	...	...	...	2	112	81
Perfumes and essences	1	16	12	...	...	...	11	187	168
Paints and varnishes	...	...	...	...	...	...	18	2,152	1,637
Other minor works	...	...	...	...	...	...	5	394	295
Total	13	260	115	3	124	100	99	5,011	3,887

Appendix VII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.									
Optical instruments	...	...	...	...	...	...	31	103	85
Surgical instruments	...	...	...	...	...	...	4	10	10
Other minor works	...	...	...	...	...	...	4	5	4
Total	...	...	...	...	...	...	39	118	99
CLASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.									
Electro-plating	...	...	...	1	26	20	30	274	251
Jewellery	...	...	...	...	...	...	65	237	199
Total	...	...	...	1	26	20	95	511	450
CLASS 17.—LIGHT, HEAT, AND POWER.									
Electrical apparatus	...	...	...	...	...	...	99	851	768
Electric light and power works*	2	126,018	66,780	32	1,424	1,068	37	7,701	1,977
Gas	4	2,760	2,269	4	794	613	6	3,526	1,335
Lamps and gas mantles	...	...	...	...	...	...	6	111	83
Hydraulic power	...	...	...	...	...	...	...	...	...
Coke works	1	90	70	...	...	...	2	712	516
Total	7	128,868	69,119	36	2,218	1,681	150	12,901	4,679
CLASS 18.—LEATHERWARE (EXCEPTING SADDLERY AND HARNESS).									
Fancy leather	...	...		...	...	...	18	140	121
Leather belting	...	...	...	...	...	...	6	59	49
Portmanteaux and bags	...	...	...	1	14	6	13	108	95
Other minor works	1	7	5	1	6	6	21	91	83
Total	1	7	5	2	20	12	58	398	348
CLASS 19.—MINOR WARES (NOT ELSEWHERE INCLUDED).									
Baskets, &c.	...	...	...	...	...	...	1	8	8
Brooms and brushes	...	...	...	...	...	...	25	154	138
Florists and seedsmen	...	...	...	...	...	...	4	50	38
Laundries—European	33	447	291	9	49	33	121	1,242	1,101
,, Chinese	...	...	...	...	...	...	1	2	2
Rubber goods	1	760	549	...	...	...	6	4,242	2,603
Toys	...	...	...	...	...	...	17	111	94
Painting and signwriting	...	...	...	...	...	...	8	28	25
Other minor works	3	496	335	...	...	...	21	514	387
Total	37	1,703	1,175	9	49	33	204	6,351	4,396
Total, All Classes	369	171,019	100,314	250	8,440	5,836	5,403	150,712	113,152

*NOTE.—These figures include 382 gas plants using 420 h.p., and 33 electric and oil plants using 465 h.p., for lighting purposes at Picture Shows.

Appendix VIII.

Horse-power of Machinery used and Method of Production, by Class of Factory, 1926.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
METROPOLITAN DISTRICT.									
I. Treating raw materials, product of pastoral pursuits	37	2,087	1,342	14	494	376	90	6,332	4,310
II. Oils and fats—animal, vegetable, &c.	11	869	706	1	12	11	15	2,054	1,634
III. Processes in stone, clay, glass, &c.	42	5,103	3,534	15	1,236	697	166	12,019	10,030
IV. Working in wood	61	6,309	4,877	22	318	101	366	13,599	10,907
V. Metal works, machinery, &c.	34	5,765	3,713	32	579	328	688	23,850	16,719
VI. Connected with food and drink, &c.	69	12,874	9,904	43	1,870	1,339	1,024	30,304	24,756
VII. Clothing and textile fabrics, &c.	33	2,093	1,585	19	816	718	1,247	10,761	9,067
VIII. Books, paper, printing, and engraving, &c. ...	5	2,378	2,045	29	464	246	378	14,329	11,071
IX. Musical instruments, &c.	1	75	58	...	...	...	20	959	937
X. Arms and explosives...	...	...	...	...	...	...	4	33	28
XI. Vehicles and fittings, saddlery and harness, &c ...	6	196	169	15	101	71	433	3,708	3,139
XII. Ship and boat building, &c.	6	2,288	2,148	3	45	43	21	1,847	1,736
XIII. Furniture, bedding, &c.	6	144	119	6	68	51	306	5,627	4,959
XIV. Drugs, chemicals, and by-products	13	260	115	3	124	109	99	5,011	3,887
XV. Surgical and other scientific instruments	...	...	...	...	...	...	39	118	99
XVI. Jewellery and plated-ware, &c.	...	...	...	1	26	20	95	511	450
XVII. Heat, light, and power	7	128,868	69,119	36	2,218	1,681	150	12,901	4,679
XVIII. Leatherware, n.e.i.	1	7	5	2	20	12	58	398	348
XIX. Minor wares, n.o.i.	37	1,703	1,175	9	49	33	204	6,351	4,396
Total	369	171,019	100,314	250	8,440	5,836	5,403	150,712	113,152

Appendix VIII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
Newcastle District.									
I. Treating raw materials, product of pastoral pursuits	2	255	255	...	...	...	11	696	513
II. Oils and fats—animal, vegetable, &c.	3	130	55	...	...	...	3	221	110
III. Processes in stone, clay, glass, &c.	20	985	685	1	85	50	17	742	373
IV. Working in wood	110	3,602	2,411	10	136	109	61	1,159	793
V. Metal works, machinery, &c.	9	53,589	34,161	31	89	58	33	41,679	9,869
VI. Connected with food and drink, &c.	38	3,455	1,953	43	863	553	185	2,717	2,016
VII. Clothing and textile fabrics, &c.	3	80	77	...	...	...	62	187	158
VIII. Books, paper, printing and engraving, &c. ...	...	...	...	6	137	96	34	296	248
XI. Vehicles and fittings, saddlery and harness, &c. ...	6	55	47	10	35	53	80	365	312
XII. Ship and boat building, &c.	5	60	44	1	4	2	1	6	4
XIII. Furniture, bedding, &c.	...	...	...	6	63	45	19	229	197
XIV. Drugs, chemicals, &c.	1	66	19	...	...	...	1	15	15
XV. Surgical and other scientific instruments	...	...	...	...	...	...	3	3	3
XVI. Jewellery and plated-ware, &c.	...	...	...	...	...	...	4	29	25
XVII. Heat, light, and power	9	5,665	4,207	20	919	678	39	2,547	2,025
XIX. Minor wares, n.e.i.	3	36	22	2	32	17	8	71	59
Total	209	67,978	43,936	130	2,363	1,641	461	51,002	16,720
Rest of State.									
I. Treating raw materials, product of pastoral pursuits	81	1,281	892	8	130	50	27	338	215
II. Oils and fats—animal, vegetable, &c.	6	82	44	...	...	...	...	...	...
III. Processes in stone, clay, glass, &c.	38	5,390	3,508	3	385	362	37	12,306	8,204
IV. Working in wood	384	9,025	7,036	51	666	459	185	2,730	1,954
V. Metal works, machinery, &c.	10	16,438	13,019	22	328	223	56	10,304	6,841
VI. Connected with food and drink, &c.	130	8,531	5,750	185	5,213	3,675	592	6,943	4,599
VII. Clothing and textile fabrics, &c.	3	503	503	14	105	86	86	1,278	1,137
VIII. Books, paper, printing, engraving, &c.	1	12	10	45	261	149	144	781	609
XI. Vehicles and fittings, saddlery and harness, &c. ...	5	174	132	88	501	352	342	1,509	1,133
XII. Ship and Boat Building, &c.	1	45	45	...	...	...	...	...	...
XIII. Furniture, bedding, &c.	3	223	94	4	28	25	24	113	79
XIV. Drugs, chemicals, &c.	3	43	4	2	9	3	3	487	467
XV. Surgical and other scientific instruments, &c ...	...	...	...	...	...	...	1	1	1
XVI. Jewellery and plated-ware, &c.	...	...	...	...	...	...	2	3	3
XVII. Heat, light, and power	34	8,558	6,477	89	7,274	5,501	139	6,973	4,075
XIX Minor wares, n.e.i.	12	211	159	2	74	53	17	130	94
Total	711	50,316	37,673	513	14,974	10,938	1,655	43,896	29,409
State.									
I. Treating raw materials, product of pastoral pursuits	120	3,623	2,489	22	624	426	127	7,366	5,038
II. Oils and fats—animal, vegetable, &c.	20	1,081	505	1	12	11	18	2,275	1,744
III. Processes in stone, clay, glass, &c.	100	11,478	7,727	19	1,706	1,109	220	25,067	18,607
IV. Working in wood	555	18,936	14,324	83	1,120	669	612	17,488	13,654
V. Metal works, machinery, &c.	53	75,792	50,893	85	996	609	777	75,933	33,329
VI. Connected with food and drink, &c.	237	24,860	17,607	271	7,946	5,567	1,801	39,964	31,371
VII. Clothing and textile fabrics, &c.	39	2,676	2,165	33	921	801	1,395	12,226	10,360
VIII. Books, paper, printing, and engraving, &c. ...	6	2,390	2,055	80	862	491	556	15,406	11,928
IX. Musical instruments, &c.	1	75	58	...	...	...	20	959	937
X. Arms and explosives, &c.	...	...	...	...	...	...	4	33	28
XI. Vehicles and fittings, saddlery and harness, &c. ...	17	425	348	113	637	456	855	5,572	4,584
XII. Ship and boat building, &c.	12	2,393	2,237	4	49	45	22	1,853	1,740
XIII. Furniture, bedding, &c.	9	367	213	16	159	121	349	5,969	5,235
XIV. Drugs, chemicals, and by-products	17	369	138	5	133	112	103	5,513	4,369
XV. Surgical and other scientific instruments	...	...	...	...	...	...	43	122	103
XVI. Jewellery and plated-ware, &c.	...	...	...	1	26	20	101	543	478
XVII. Heat, light, and power	50	143,091	79,803	145	10,411	7,860	328	22,421	10,779
XVIII. Leatherware, n.e.i.	1	7	5	2	20	12	58	398	348
XIX. Minor wares, n.e.i.	52	1,950	1,356	13	155	103	229	6,552	4,549
Total	1,289	309,513	181,923	893	25,777	18,415	7,618	245,660	159,181

Appendix IX.

Horse-power of Machinery used and Method of Production—1922–1926.

Year.	Steam.		Gas.		Electricity and other.		Total.	
	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	*No. of Factories.	Horse-power.
Metropolitan District.								
1922	336	76,174	401	7,306	4,258	71,862	4,995	155,342
1923	348	80,287	384	6,906	4,517	80,105	5,249	167,298
1924	354	83,968	337	6,988	4,938	91,493	5,629	182,449
1925	349	88,435	288	6,013	5,222	99,719	5,859	194,167
1926	369	100,314	250	5,836	5,403	113,152	6,022	219,302
Newcastle District.								
1922	204	7,905	119	1,370	391	10,229	714	19,504
1923	210	37,395	121	1,611	425	9,783	756	48,789
1924	248	39,509	107	1,497	525	11,667	880	52,673
1925	235	41,081	97	1,695	544	13,106	876	55,882
1926	209	43,936	130	1,641	461	16,720	800	62,297
Rest of State.								
1922	600	27,180	504	7,931	1,032	10,631	2,136	45,742
1923	651	27,519	486	8,399	1,127	12,108	2,264	48,026
1924	752	41,529	534	8,906	1,277	24,845	2,563	75,280
1925	722	41,664	516	9,945	1,459	24,571	2,697	76,180
1926	711	37,673	513	10,938	1,655	29,409	2,879	78,020
State.								
1922	1,140	111,259	1,024	16,607	5,681	92,722	7,845	220,588
1923	1,209	145,201	991	16,916	6,069	101,996	8,269	264,113
1924	1,354	165,006	978	17,391	6,740	128,005	9,072	310,402
1925	1,306	171,180	901	17,653	†7,225	†137,396	9,432	326,229
1926	1,289	181,923	893	18,415	7,519	159,281	9,701	359,619

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using powe

† Including 81 factories using oil of 1,713 horse-power (Metropolitan District).
„ 129 „ „ 488 „ (Newcastle District).
„ 649 „ „ 5,274 „ (Rest of State).
„ 859 „ „ 7,475 „ (State).

Appendix X.

Employment of Children.

Certificates of Fitness by class of Factory in Districts, 1926.

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Class 1.—Treating Raw Material—the Products of Pastoral Pursuits.									
Tanneries	44	...	...	...	...	...	1	...	45
Wool scouring	4	...	...	...	...	...	...	...	4
Class 2.—Oils and Fats—Animal and Vegetable.									
Kerosene and oil	20	...	...	...	...	...	...	...	20
Soap, &c.	33	20	5	10	...	...	2	...	70
Class 3.—Processes in Stone, Clay, Glass, &c.									
Glass and bottle	113	7	...	...	...	...	...	...	120
Marble and slate	5	...	...	...	...	...	...	...	5
Potteries and bricks	215	...	2	...	...	...	4	...	221
Lime and cement	9	...	15	...	...	...	1	...	25
Class 4.—Working in Wood.									
Sawmills and joinery ...	116	7	6	...	...	...	31	1	161
Class 5.—Metal Works and Machinery, &c.									
Brass and copper	110	9	...	...	...	...	11	...	130
Engineering	441	25	54	...	...	...	10	...	530
Ironworks, stoves, &c. ...	212	8	80	...	...	...	12	...	312
Smelting and ore works ...	2	...	2	...	...	...	3	...	7
Wire works	41	3	24	...	...	...	...	...	68

Appendix X—*continued.*

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Class 6.—Connected with Food and Drink, and the Preparation thereof.									
Aerated waters	8	...	2	1	...	...	...	...	11
Biscuits	289	253	6	2	...	...	...	...	550
Bread and pastry	37	5	3	...	2	...	8	...	55
Condiments	8	14	1	...	...	...	4	...	27
Confectionery	138	270	8	9	...	...	7	2	434
Flour mills	4	6	...	...	...	...	3	...	13
Groceries and packing ...	64	91	5	...	...	...	...	...	160
Ice and refrigerating ...	11	...	3	...	...	...	2	...	16
Jam	11	6	...	...	...	...	1	1	19
Meat preserving	15	3	40	...	...	...	4	...	62
Tobacco	45	64	...	...	...	...	...	...	109
Class 7.—Clothing and Textile Fabrics, and Fibrous Materials.									
Artificial flowers	2	28	...	...	...	...	...	...	30
Boots and shoes	209	268	2	...	1	...	2	...	482
Calico bags	6	15	...	...	...	...	...	...	21
Clothing	47	451	1	80	...	...	...	19	598
Corsets	4	70	...	...	...	...	...	...	74
Cotton mills	33	23	...	...	...	...	...	...	56
Dressmaking	9	547	...	13	...	...	1	5	575
Hats and caps	66	250	...	...	...	...	...	1	317
Hosiery and knitting ...	52	348	...	...	...	...	1	1	402
Rope	66	28	...	...	...	...	...	...	94
Shirts	10	386	...	29	...	...	...	...	425
Tents, &c.	8	7	...	...	...	...	1	...	16
Umbrellas	12	7	...	...	...	...	...	...	19
Whiteworking	3	216	...	...	...	...	...	1	220
Woollen mills	113	177	...	...	...	...	30	58	378
Class 8.—Books, Papers, Printing, Engraving.									
Bookbinding	9	122	...	...	...	...	...	...	131
Paper boxes	111	176	...	3	...	...	...	...	290
Paper mills	13	5	...	...	...	...	...	...	18
Photography	9	28	...	1	...	...	...	...	38
Printing	285	86	12	2	3	...	18	...	406
Type founding	9	3	3	...	...	...	...	...	15
Class 9.—Musical Instruments, &c. Pianos, Organs and Sewing Machines.									
Musical instruments	10	8	...	...	...	...	...	...	18
Class 11.—Vehicles and Fittings, Saddlery, Harness, &c.									
Coachbuilding	11	...	3	...	...	...	...	...	14
Motors and cycles	154	6	12	...	...	...	10	...	182
Class 13.—Furniture, Bedding, &c.									
Bedsteads, bedding	46	5	1	...	...	...	1	...	53
Furniture	106	16	3	...	...	...	2	...	127
Class 14.—Drugs, Chemicals and By-Products.									
Chemicals and Blue	69	113	...	...	...	...	1	...	183
Paints and varnishes ...	25	4	...	...	...	...	...	...	29
Class 16.—Timepieces, Jewellery and Plated Ware.									
Jewellery	31	27	...	...	...	...	...	...	58
Class 17.—Light, Heat, and Power.									
Electric light, &c.	232	28	...	...	...	...	1	...	261
Class 18.—Leatherware, excepting Harness and Saddlery.									
Leather bags, &c.	118	151	2	...	...	...	...	...	271
Class 19.—Minor Wares not elsewhere included.									
Brooms	21	17	1	...	...	...	...	...	39
Cooperage	4	...	...	...	...	...	...	...	4
Laundries	3	52	1	8	...	...	2	3	69
Plumbers and tinsmiths ...	127	12	2	...	1	...	3	...	145
Rubber goods	65	31	...	...	...	...	...	...	96
Toys	11	3	...	...	...	...	...	...	14
Miscellaneous	80	77	24	18	...	...	12	...	211
Total	4,184	4,582	323	176	7	...	189	92	9,553

Appendix XI.—Accidents by Machinery, 1923-26.

Machines.	1923.	1924.	1925.	1926.
Metal Working Machines—				
Drills	19	13	16	13
Emery wheels	49	38	40	36
Guillotines	5	2	1	6
Lathes	24	23	21	20
Milling	3	4	2	4
Polishing	...	2	2	2
Power presses	42	37	37	39
Riveting	3	3	1	4
Rolling	10	10	10	5
Screwing	...	2	1	2
Shaping	2	1	2	1
Shears	10	13	7	6
Slotting	...	4	...	1
Steam hammers	3	15	15	...
Wire-working	123	109	114	74
Other tinsmiths' machines	3	...	...	3
Other ironworking machines	18	44	18	34
	314	320	317	250
Woodworking Machines—				
Band saws	4	6	7	11
Boring	2	3	3	2
Circular moulders	21	33	22	13
Circular saws	74	77	72	65
Jointers	35	19	...	14
Lathes	3	1	2	2
Planers	10	36	38	22
Other woodworking machines	15	5	15	26
	164	180	159	155
Printing Machines—				
Cardboard box machines	12	12	3	17
Envelope machines	2	2	2	3
Guillotines	1	2	...	3
Platens	11	7	13	11
Printing machines	17	15	11	14
Wire-stitching machines	11	19	24	13
Other printing machines	7	13	39	39
	61	70	92	91
Food and Drink Machines—				
Biscuit machines	2	8	1	4
Confectionery machines	7	3	10	3
Crown corking machines	...	...	...	...
Dough brakes	8	7	2	6
Mincing	9	10	10	9
Mixing	2	1	3	..
Tobacco	5	10	4	7
Other food and drink machines	9	6	9	10 3
	42	45	39	42

Machines.	1923.	1924.	1925.	1926.
Stone, clay, &c., Machines—				
Brick presses	5	3	1	2
Pans	...	...	..	1
Tile presses	4	2	1	1
Other stone, &c., machines	1	1	1	8
	10	6	3	12
Leather Working Machines—				
Power presses	5	3	3	4
Rolling	2	...	3	4
Shaving	1	1	...	...
Other leather machines	10	5	11	12
	18	9	17	20
Clothing Machines—				
Band knives	1	...	..	...
Boot machines	11	9	2	12
Fur-cutting	...	...	...	...
Ropemaking	1	2	...	...
Sewing	8	8	7	6
Wool machines	9	10	11	17
Other clothing machines	5	2	7	10
	35	31	27	45
Laundry Machines—				
Calenders	8	6	4	10
Folding	...	...	...	...
Hydro-extractors	...	...	...	1
Ironing	2	3	4	6
	10	9	8	17
Rubber Working Machines—				
Power presses	...	...	...	...
Rolling	...	5	...	1
Other rubber machines	3	7	3	12
	3	12	3	13
Brushmaking machines	...	1	...	...
Paintmaking machines	...	...	1	1
Soapmaking machines	2	5	4	4
Miscellaneous Machines—				
Elevators and cranes	30	57	33	36
Engines	5	5	2	4
Fan	1	1	2	...
Mill gearing	57	87	82	46
Other machines	4	31	23	34
	99	187	147	125
Total	756	869	812	770

Appendix XII.—Prosecutions by Districts, 1922-26.

Year.	Informations Laid.	Convictions.	Dismissals.	Withdrawals.
		Metropolitan.		
1922	46	46	.....	.....
1923	62	61	1	.....
1924	74	72	.....	2
1925	79	75	3	1
1926	79	72	4	3
		Newcastle.		
1922	6	6	.....	.....
1923	1	1	.....	.....
1924	7	7	.....	.....
1925	7	7	.....	.....
1926	5	5	.....	.....
		Rest of State.		
1922	8	8	.....	.....
1923	7	7	.....	.....
1924	8	8	.....	.....
1925	6	6	.....	.....
1926	6	6	.....	.....
		The State.		
1922	60	60	.....	.....
1923	70	69	1	.....
1924	89	87	.....	2
1925	92	83	3	1
1926	90	83	4	3

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DEPARTMENT OF LABOUR AND INDUSTRY.

REPORT

ON THE WORKING OF THE

FACTORIES AND SHOPS ACT, 1912,

DURING THE YEAR 1927.

Printed under No. 4 Report from Printing Committee, 18 October, 1928.

SYDNEY: ALFRED JAMES KENT, GOVERNMENT PRINTER.

1928.

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THE THIRTY-FIRST SERIES OF ANNUAL REPORTS BY INSPECTORS APPOINTED UNDER THE FACTORIES AND SHOPS ACT, 1912, FURNISHED TO THE MINISTER FOR LABOUR AND INDUSTRY IN TERMS OF SECTION 19 OF THAT ACT.

The Under-Secretary, Department of Labour and Industry, to The Honorable the Minister for Labour and Industry.

Department of Labour and Industry,
20th August, 1928.

Sir,

I have the honour to forward for submission to Parliament, in terms of section 19 of the Factories and Shops Act, 1912, Annual Reports on the operations of that Act by each of the Inspectors appointed thereunder, for the year ending the 31st December, 1927.

I have, &c.,
F. W. KITCHING,
Under-Secretary.

OFFICE OF THE CHIEF INSPECTOR OF FACTORIES AND INVESTIGATION OFFICER.*

Operations.

Report in terms of Section 19 of the Factories and Shops Act, 1912.

Arrangement of Inspectorial Districts.

The provisions of the Factories and Shops Act were extended to cover the whole of the State, as from the 1st July, 1915. The area outside of the Metropolitan District is divided up into Country Districts, and the following statement will show the arrangement of these districts at the close of 1927 :—

District.	Head Centre.	Staff.
Newcastle	Newcastle	Superintending Inspector Clark.
		Inspector MacCubbin.
		,, Young.
North Coast	Sydney	,, Hastie.
North-Western	Sydney	,, Dunwoodie.
South Coast	Woonona	,, Waugh.
Southern	Sydney	,, Wallace.
South-Western	Sydney	,, McEvoy.
Western	Orange	,, Baker.
Broken Hill	Broken Hill	,, Bennet.
Central Western	Sydney	,, Varley.

The Country District Officers, in addition to the work of factory inspection and investigations under the Industrial Arbitration Act, are required to carry out work under the Early Closing Acts as well as that pertaining to the departmental policy of Country Labour Exchanges.

Inquiries emanating from the Immigration Section of the department also devolved upon the Inspectors in both the metropolis and the country.

The following new appointments, resignations. interchanges of Inspectors, between the Metropolitan and Country districts, and alterations in control of districts were made during the year :—

Mr. Senior Inspector Dunleavy and Mr. Inspector Clark were appointed Superintending Inspectors of Factories and Shops as from 1st January, 1927.

Inspector Mrs. Duncan, Inspector Mrs. Larkin, and Messrs. Inspectors Hutchinson, Wallis, and Williams, formerly Early Closing and Industrial Inspectors, were appointed to be also Inspectors of Factories and Shops as from 1st January, 1927.

Mr. Inspector Darbon resigned as from 7th March, 1927, and Mr. Inspector Crozier resigned at the end of the year.

Messrs. Inspectors MacCubbin and Young were transferred to the Newcastle Office in place of Messrs. Inspectors Dunwoodie and Darbon.

After his transfer from the Newcastle Office to the Metropolitan District, Mr. Dunwoodie was given control of the Tamworth District in place of Mr. Senior Inspector Burkitt, retired, and later was transferred to the Scaffolding and Lifts Branch.

Statistics.

Cards of instruction served on the occupiers of factories within the Metropolitan District numbered 13,231 for 1927, as compared with 14,158 in 1926 ; in the Newcastle District, 1,581 in 1927, as against 2,005 in 1926 ; in the Broken Hill District, 72 in 1927, compared with 91 in 1926 ; in the rest of the State 4,557, as against 4,748 in the previous year.

*Matters covered by the Boiler Inspection Regulations made under Section 62 of the Factories and Shops Act, 1912, are reported upon by the Departmental Engineer and Chief Inspector of Scaffolding and Lifts.

Returns collected from factory occupiers for 1927 show that at the date of collecting the returns (end of November, 1927) 11,413 factories throughout the State employed 148,958 persons, compared with 11,829 factories employing 151,622 persons at the end of 1926, a decrease of 416 factories and a decrease of 2,664 persons. Male employment decreased by 2,632, there being an increase of 215 under 21 years of age, and a decrease of 2,847 over that age. Female employment decreased by 32, there being an increase of 103 under 21 years of age, and a decrease of 135 over that age. Of the total persons employed, 107,018, or 71·8 per cent., were male, and 41,940, or 28·2 per cent., were female.

The following statement will show the increase or decrease in the number of factories and persons, males and females, employed therein, from the year 1915, when the whole of the State was brought under the provisions of the Act, to 1927 inclusive :—

Year.	Factories registered.	Increase over previous year.	Persons employed.		Total.	Increase over previous year.		Total	Percentage of total increase.	
			Males.	Females.		Males.	Females.		Males.	Females
1915	7,425	1,432	70,517	28,706	99,223	7,181	1,901	9,082	79·1	20·9
1916	8,065	640	63,895	28,757	92,652	*6,622	51	*6,571	*100·8	·8
1917	8,099	34	66,066	29,185	95,251	2,171	428	2,599	83·6	16·4
1918	8,346	247	74,719	31,246	105,965	8,653	2,061	10,714	80·8	19·2
1919	9,003	657	84,474	32,431	116,905	9,755	1,185	10,940	89·2	10·8
1920	9,745	742	92,566	33,479	126,045	8,092	1,048	9,140	88·6	11·4
1921	10,087	342	88,819	33,565	122,384	*3,747	86	*3,661	102·3	2·3
1922	10,674	587	86,935	36,142	123,077	*1,884	2,577	693	*271·9	371·9
1923	11,058	384	95,926	35,635	131,561	8,991	*507	8,484	*105·9	5·9
1924	11,559	501	98,302	36,414	134,716	2,376	779	3,155	75·3	24·7
1925	11,836	277	100,771	37,916	138,687	2,469	1,502	3,971	62·1	37·9
1926	11,829	*7	109,650	41,972	151,622	8,879	4,056	12,935	68·6	31·4
1927	11,413	*416	107,018	41,940	148,958	*2,632	*32	2,664	*98·7	*1·3

*Decrease.

Detailed figures as to the number and classes of factories, number and sex of employees, and horse-power of machinery used in the various districts of the State will be found in the Appendices I to XII

At the end of November, 1927, there were 6,877 registered factories in the Metropolitan District, employing 119,931 persons, an increase of 40 factories and a decrease of 2,052 persons, compared with the figures at the end of the previous year. Of this decrease, males represented a decrease of 171, or 8·3 per cent., and females an increase of 145, or 108·3 per cent., 1,951, or 95·1 per cent., and 75, or 4·9 per cent., being respectively a decrease of males and females over the age of 21 years. Of the total persons employed, males represented 80,396, and females 39,535, or 67 and 33 per cent. respectively. Only 8,441, or 7 per cent., were under 16 years of age; 14,513, or 12·1 per cent., were between 16 and 18 years; 17,910, or 14·9 per cent., were between 18 and 21 years; and the remainder, 79,037, or 66 per cent., were over 21 years of age.

Of the total males employed, 3,462, or 4·2 per cent., were under 16 years of age; 7,156, or 8·8 per cent., between 16 and 18 years; 9,055, or 11·2 per cent., between the ages of 18 and 21 years; and the remainder, 60,723, or 75·8 per cent., were over 21 years of age.

Of the total females employed, 4,979, or 12·6 per cent., were under 16 years of age; 7,387, or 18·6 per cent., between 16 and 18 years; 8,855, or 22·3 per cent., between the ages of 18 and 21 years; and the remainder, 18,314, or 46·5 per cent., were over 21 years of age.

It is satisfactory to report that out of a total employment in the Metropolitan District of 119,931 only 8,441, or 7 per cent., were under 16 years of age. A comparison of the figures of each sex under and over 21 years of age is somewhat interesting, inasmuch as it demonstrates that, whereas the difference between the number of females of these ages is slight, the excess of males over 21 years of age is large. There were more females than males under 21 years of age employed in the factories in the Metropolitan District, but the males over 21 years of age exceeded the number of females over that age in the proportion of more than 3 to 1.

During the period of 1912 to 1914 the percentages of boys and girls under 16 years of age remained about the same, but for the period 1914 to 1927 the percentage slightly increased, as the following table will show :—

Percentage distribution of persons under 16 years of age.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1912	2·3	2·9	5·2	1920	2·5	3·4	5·9
1913	2·2	2·8	5·1	1921	2·6	3·6	6·2
1914	2·3	2·9	5·2	1922	2·6	3·8	6·4
1915	2·8	3·1	5·9	1923	2·7	3·8	6·5
1916	2·6	3·3	5·9	1924	2·8	3·7	6·5
1917	2·5	3·4	5·9	1925	2·7	3·8	6·5
1918	2·4	3·3	5·7	1926	3·0	3·9	6·9
1919	2·6	3·4	6·0	1927	2·9	4·1	7·0

Taking the males and females under 16 years of age collectively, there was a slight decrease during 1913 over the previous year, but from 1914 to 1927 the percentage gradually increased, equalling in 1915, 1916, and 1917 that for 1920, as the table indicates. The percentage for 1918 was slightly below that for the three previous years, being 5·7 as against 5·9, but for 1923, 1924 and 1925 it was higher than for any year since 1909, when it was 6·8. The percentage for 1927 is the highest on record. The tendency seems to be for the percentage of females to increase steadily, whilst that of males fluctuates.

The industry class employing the greatest number of persons in 1927 was clothing and textile fabrics with 32,215, followed by metal works, machinery, &c., with 19,560, and food and drink, &c., with 16,758, these three classes accounting for 68,533 out of a total of 119,931 employed in all classes of factories in the Metropolitan District.

Food and drink showed an increase of 1,108; and printing increased by 437; light, heat and power by 331; shipbuilding 58; and raw materials by 49, as compared with 1926. The noticeable decreases in employment were in metal works, &c., 1,468; vehicles, &c., 757; clothing 479; minor wares 334; musical instruments 246; leather 212; stone, clay and glass 260; and woodworking 205.

The following statement will show the increase or decrease in persons, males and females, from 1915 to 1927 inclusive:—

Year.	Persons employed.			Increase over previous year.			Percentage of tota increase.	
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.
1915	54,891	26,438	81,329	.....	.....	.....	.....	.....
1916	47,378	26,649	74,027	*7,513	211	*7,302	*102·9	2·9
1917	48,927	27,223	76,150	1,549	574	2,123	72·9	27·1
1918	55,355	29,145	84,500	6,428	1,922	8,350	77·0	23·0
1919	62,030	30,309	92,339	6,675	1,164	7,839	85·2	14·8
1920	68,583	31,270	99,853	6,553	961	7,514	87·2	12·8
1921	63,850	31,309	95,159	*4,733	39	*4,694	*100·8	·8
1922	66,888	33,802	100,690	3,038	2,493	5,531	55·0	45·0
1923	70,022	33,334	103,356	3,134	*468	2,666	117·5	*17·5
1224	71,642	34,131	105,773	1,620	797	2,417	67·0	33·0
1925	74,096	35,728	109,824	2,454	1,597	4,051	60·5	39·5
1926	82,518	39,465	121,893	8,422	3,737	12,159	69·3	30·7
1927	80,396	39,535	119,931	*2,122	70	2,052	*103·4	3·4

Decrease.

The following table shows the increase or decrease in number of factories and persons employed therein during the same period:—

Year.	Number of factories.	Increase over previous year.	Persons employed.	Increase over previous year.
1915	4,758	.....	81,329	.....
1916	4,814	56	74,027	*7,302
1917	4,799	*15	76,150	2,123
1918	4,942	143	84,500	8,350
1919	5,330	388	92,339	7,839
1920	5,842	512	99,853	7,514
1921	5,934	92	95,159	*4,694
1922	6,367	433	100,690	5,531
1923	6,573	206	103,356	2,666
1924	6,868	295	105,773	2,417
1925	6,947	79	109,824	4,051
1926	6 837	*110	121,983	12,159
1927	6,877	40	119,931	*2,052

* Decrease.

Total increase—2,079 factories, 40,654 persons.

As at 27th November, 1927, 1,147 registered factories in the Newcastle District employed 12,655 persons, of whom 11,561 or 91·3 per cent., were males, and 1,094, or 8·7 per cent., were females. 61·4 per cent. of the females employed in the Newcastle District and 17·9 per cent. of the males were under 21 years of age. The large percentage of adult male employment was due to a great extent to the number employed at the steel and iron works of the Broken Hill Proprietary Company, Limited, at Port Waratah, Rylands Bros. (Aust.) Limited, The Commonwealth Steel Products, Limited, and Lysaght's, Limited, aggregating 5,301, or nearly 56 per cent. of the total number of males over 21 years of age.

In the remainder of the State, there were on 27th November, 1927, on the records of the Department, 3,389 registered factories, employing 16,372 persons, of whom 15,061, or 91·9 per cent., were males, and 1,311, or 8·1 per cent., females. This was a decrease of 386 factories and an increase of 72 persons, as compared with 1926.

Horse-power of Machinery.

At the end of the year 1927, 9,847 factories throughout the State were using machinery equal to 383,445 horse-power.

Steam power, representing 183,489 horse-power, was used in 1,084 factories; gas power (16,270 horse-power) in 689 factories; electricity and other (183,686 horse-power) in 8,074 factories.

Child Labour in Factories.

One hundred and forty-three children under 14 years of age (92 boys and 51 girls) were granted the special permission of the Minister to engage in factory employment. Nine thousand two hundred and seventy-eight children were certified as physically fit for employment in certain classes of factories.

Following is a table showing the distribution of the foregoing permits and certificates in the districts in which the State is divided for departmental purposes:—

District.	Permits granted.			Certificates of Fitness.	
	Special (to children between 13 and 14 years of age).			Issued.	Declined.
	Males.	Females.	Total.		
Metropolitan	90	51	141	8,543	4
Newcastle	1	.....	1	488	.....
Broken Hill	.....	.....	.....	2	.....
Rest of State	1	.....	1	245	.....
Total	92	51	143	9,278	4

By way of comparison, the numbers of special permits granted during the last ten years are shown hereunder, and the allocation of the children who were granted certificates into the various industries is shown in Appendix X.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1918	134	31	165	1923	152	74	226
1919	200	37	237	1924	160	58	218
1920	142	38	180	1925	173	64	237
1921	125	44	169	1926	118	69	187
1922	116	61	177	1927	92	51	143

New Industries.

No new industry was established during the year, though there were many extensions of existing industries foreshadowing increased output and larger employment.

With the expansion of trade many firms found it necessary to arrange for more commodious premises, in some cases trebling their floor space.

Several industries recently introduced into the State have become firmly established and are now producing goods which compare more than favourably with the same type of article previously imported.

The remarkable growth in the motor trade has resulted in the erection of many modern buildings in which accessories of all kinds are now being manufactured.

One large American company decided to establish premises locally for the production of tyres, tubes, &c., and will, when the factory is in full operation, employ a large number of hands.

Overtime in Factories.

During 1927 the Minister granted applications for extensions of overtime in respect of 60 factories, affecting 130 male and 1,040 female employees. Similar permission was granted during the previous year in respect of 85 factories, involving 2 males and 866 female employees, and the figures for 1925 were 34 factories, and 654 females.

New Industries and Expansion of Existing Industries.

The iron and steel industry in the State is being further extended by the erection at Port Kembla of a large and steel works, which, with the new railway being constructed to connect the port with the Southern railway line at Moss Vale, will cost upwards of £4,000,000. Construction work is proceeding and at first the works will be confined to manufacture of pig-iron to the amount of 3,000 tons weekly, providing employment for about 500 men. It is estimated that when all sections of the works are in full blast about 3,000 men will be employed.

The construction of a large cement works about 2 miles from Berrima was commenced during the year and it is anticipated that when the works are in full swing the output of cement will reach 120,000 tons per annum, giving employment to about 350 men.

In the Granville area a large motor tyre and rubber company completed the erection of spacious factory premises upon a site of 22 acres with river frontage. In the main building there is floor space of 90,000 square feet, and the storage buildings and power-house give an additional floor space of 12,000 square feet. The total cost of land, building, and equipment approximated £350,000. Production was commenced in November with 90 employees who produced 50 tyres per day. At the present time 350 employees are producing 700 tyres and tubes per day, and it is expected that the estimated full capacity of the plant, 900 tyres and tubes per day, will shortly be reached.

In the same district the erection of a large factory in which cream of tartar and tartaric acid will be manufactured was commenced during the year. The cost of the premises and plant are set down at about £100,000, and it is proposed to produce sufficient of the above commodities, eventually, to satisfy the wants of the Commonwealth. Hitherto these articles have been imported, mostly from Italy and France.

The proprietors propose to manufacture the above products from crude material available within Australia. The amount of "Argol" offering at the present time will not be sufficient to satisfy factory needs, but it is anticipated that more will be forthcoming for a ready local market.

In the roofing tile industry difficulty has been experienced in winter time to dry out the tiles satisfactorily. As an experiment, kilns specially situated under drying floors have been erected at Camellia. These, with the necessary plant, have cost upwards of £25,000, and the experiment will be watched with great interest.

In this same area a large company, with headquarters in Tasmania, has purchased a large extent of land and proposes to erect thereon premises in which caustic soda will be manufactured. The scheme also involves the erection of additional buildings in which subsidiary industries will be carried on. It is expected that a large number of men will be employed.

It is very satisfactory to note that most of the materials used in the construction of the electric railways is now locally made. The Chief Commissioner recently stated that the New South Wales Railway Commissioners spent the sum of £25,000,000 during 1927 upon transport and construction. Of this sum, £7,859,000 was expended upon material and plant, all of it spent in Australia except £417,000.

In the early days everything for railway construction had to be imported, but to-day 95 per cent. of all railway requirements for construction and maintenance is made in Australia.

An important extension of Australian industry is being established at Hamilton, near Newcastle. A large company is erecting a factory upon 16 acres of land in which electrical equipment will be manufactured. The cost of the first building and plant is about £75,000, and when operations are commenced early in the new year it is anticipated that about 100 men will be employed. When all the projected units are established the number of employees will be very largely increased.

The production, by a fireless process, of stone composition glazed tiles for the facing of exteriors of buildings and for interior decorative purposes, was commenced at Redfern during the year. The process is new, and, it is claimed, has an advantage over the fire-glazed variety of tiles in that the new product is finished within forty-eight hours ready for use.

A new foodstuffs factory is being erected at Waterloo. Its first unit will cost £125,000, and will contain more than 50,000 square feet of floor space. Within a short time after starting operations in July next more than 12,000 bushels of corn will be used in this factory each week, in addition to many thousands of bushels of wheat, giving employment to a large number of men and women.

Fencing and Guarding of Machinery.

The satisfactory advance in the standard of fencing and guarding of machinery noted during the past several years was satisfactorily maintained in the year under review. Occupiers are more and more consulting the Department when putting down new machinery, and as a result the inspector is able to have satisfactory fencing erected before the machines are operated. This consultative method allows of the operatives working the machines to express their opinions, and as a result a thoroughly practical safeguard is established.

Mesh-wire guarding, firmly attached to stanchions and tubular rails, is now in general use, and as there are several firms specially producing mesh-wire it is now more easily obtainable and at a satisfactory price. The painting of this form of safeguarding would make it more distinctive, and where reflection of natural light is obtainable would improve the lighting at the machine.

While wooden guards, if rendering mill-gearing safe, must perforce be accepted by the inspector, it is not too much to say that in the metropolitan area this old-time form of fencing is rapidly falling into disuse.

As in former years, the majority of accidents occurred at circular saws, hand planers, spindle moulders, and power presses and with the whole of the inspectorate concentrating upon these particular machines and the co-operation of the employers and employees, it is confidently expected that the potential dangers thereat will be considerably reduced. Very frequently, the neglect of the operative to use the special guard provided for a particular operation results in serious injury. In those factories where Safety First Committees have been formed the number of accidents has been materially reduced and a more widespread adherence to this method of shop control would certainly be in the interests of the community.

The establishment of a Safety First Council among the large factory employers would, it is considered, disseminate much valuable matter in the form of safety posters, &c. which would act as continual reminders to the employees in the various industries of the dangers to be encountered therein and of the need of exercising caution at all times.

The following table sets out the classes of factory in which the additional overtime was worked :—

Class of Factory.	Factories.	Employees.		Total.
		Male.	Female.	
Class II—				
Soap Making	1	...	12	12
Class V—				
Tinsmithing	1	...	14	14
Class VI—				
Pastrycooking	1	1	3	4
Confectionery	9	14	144	158
	10	15	147	162
Class VII—				
Clothing	4	...	238	238
Tailoring	3	...	209	209
Corset Making	4	...	122	122
Dressmaking and Millinery	3	...	32	32
Furriery	3	...	28	28
Hats and Caps	1	...	2	2
Towel Making	1	...	6	6
Hosiery	1	...	32	32
	20	...	669	669
Class VIII—				
Printing	18	...	134	134
Class XIII—				
Furnishing Drapery	1	...	11	11
Furniture	6	115	7	122
	7	115	18	133
Class XVII—				
Electric Meter-making	1	...	33	33
Class XIX—				
Artificial Flower-making	1	...	5	5
Other Minor Wares	1	...	8	8
	2	...	13	13
Total	60	130	1,040	1,170

Following is an analysis of the reported accidents, and the extent of injuries :—

Extent of Injury.	Accidents Reported.				
	District.				Total.
	Metropolitan.	Newcastle.	Broken Hill.	Rest of State.	
Fatal	17	5	...	1	23
Permanent Injury –					
Loss of arms	5	...	...	1	6
,, hands	1	1	...	...	2
,, fingers or parts	119	13	...	1	133
,, eye	2	...	...	1	3
,, foot or part	3	...	...	...	3
	130	14	...	3	147
Temporary Injury—					
Gas poisoning	...	1	...	...	1
Burns, scalds, &c.	93	47	...	7	147
Cuts, lacerations, bruises—					
On hands	370	26	...	19	415
,, arms	52	7	...	1	60
,, body	25	12	...	4	41
,, feet	10	6	...	...	16
,, head	25	5	...	1	31
Other	16	4	...	1	21
	591	108	...	33	732
Total	738	127	...	37	902

The following statement gives the distribution of accidents as due to machinery or other causes. Appendix XI contains details of machinery at which accidents happened.

Causes of Accident.

Machinery—

Metal working	259	Paper, printing	97	*Miscellaneous—*	
Woodworking	147	Leather	11	Mill gearing	43
Stone, clay, &c.	7	Rubber	19	Elevators, conveyors, &c.	13
Food and drink	66	Laundry	10		
Clothing, &c.	65	Other	28		

Other Causes.

Dangerous substances—		Electricity	4
Steam	6	Chemicals	9
Hot substances—		Gas	4
Water	3	Other	4
Metal	81		
Other	26	Total	902

Fatal Accidents.

During the year under review, twenty-three persons lost their lives in factories, seventeen as the result of mechanical accidents, the balance being due to non-mechanical causes.

Of the former, a sudden explosion at an oil refining works stands out as the worst accident of the year. Evidence at the inquest disclosed that a party of men were busy at a pot still which had not been working satisfactorily. A sudden explosion occurred which carried the top portion of the still some distance from its bed and wrecked the surrounding brickwork. Following the explosion there was a fierce burst of flame, and one of the employees, after the flames were subdued, was found lying dead some little distance from the still. As the result of their injuries two other men, one of whom was the son of the managing director and acted as works engineer, succumbed to their injuries a few days later. The coroner found that the injuries were accidentally received.

A type of accident, which is fortunately rare, occurred at a bottling machine in an aerated water factory. An employee was bottling soda water in syphons and was removing a filled syphon from the machine when it suddenly burst and a piece of broken glass inflicted such serious injuries upon his abdomen that he died the following day. The evidence at the inquest disclosed that the prescribed guards were worn and that the machine was in good order and effectively safeguarded. The deceased made no other statement than that "one burst," and it had to be assumed that in taking the bottle from the machine he either bumped it, causing it to break, or that it was a faulty type, unable to bear the heavy pressure induced during the filling.

Three employees were electrocuted in separate factories as the result of their coming into contact directly or indirectly with live wires.

In the first case, the circumstances were somewhat peculiar. A hand crane was being used to move some steel channels, and the load having been lifted to the required height was being pulled round to the proper position when the wire rope came in contact with some live wires transmitting the electrical current to the handle of the crane. An employee was holding the handle at the time and received such a severe shock that his death resulted. Inquiries proved that the wires, which were insulated, had been in the same position for three years and no danger was anticipated. The contact of the crane with the wires carried away the insulation.

The second electrocution occurred at a large pottery works. An employee was observed standing close to a motor control, and as he made no movement he was spoken to and found to be dead. His hand was within the control cover, and the man who spoke to him, endeavouring to pull him away, received a very severe shock. Cause of death was attributed at the inquest to the deceased having inadvertently placed his hand on the live parts of the control. Alterations were affected which allow of the starting handle being operated without the necessity of raising the cover.

In the third case, the victim was a crane-driver, operating an overhead travelling crane from the ground by means of wire ropes. Any fault in the control necessitated that the operator had to climb a ladder to the circuit breaker to shut off the current. The inquest produced no conclusive evidence as to how the deceased met his death, but the circumstances pointed to his having made accidental contact with the main live terminal while feeling for the handle of the circuit breaker.

The change in the position of the circuit breaker will allow of it being operated, in the future, from the ground.

An unusual fatality occurred at an engineering establishment. An elderly man was passing between two lathes when the end of a hexagon steel bar projecting from a turret lathe and revolving at a speed of about 250 r.p.m. caught his clothing and hurled him against the bed of the adjoining lathe, with resulting injuries which were so serious that death ensued. Action was taken which compelled the shrouding of projecting bars to prevent any repetition of such accidents.

A foreman blacksmith met his death in a factory by being struck on the head by a large type belt-fastener. The belt, which was of a heavy type, parted, and one end bearing the fastener came in contact with a wooden beam. The impact caused the fastener to be separated from the belt end and it was thrown with terrific force through the window of an adjoining office, striking the foreman on the head and causing his death.

An extraordinary accident, resulting in fatal injuries to one employee and very serious injuries to another, occurred in a stock food manufactory. An employee was carrying a large piece of metal close to a moving belt when by some means it dropped on to the belt which carried it to a large pulley and as a result the latter was burst into pieces. One of these struck a labourer who was working adjacent and inflicted injuries from which he died shortly afterwards in the local hospital. The man who was carrying the metal was also struck by a flying fragment and received severe injuries.

In a wire netting factory an employee was oiling the bearings supporting a length of revolving shafting at a distance of about 11 feet from the ground when the sleeve of a cardigan jacket he was wearing became caught on the shafting, round which he was whirled and so severely injured that he died about a fortnight later.

A similar accident happened in a steam laundry, the circumstances being almost identical. Both of these fatalities would most probably have been avoided if the precaution had been taken to stop the machinery during the oiling process.

In a roofing tile factory men were engaged in replacing a belt upon a pulley rotating slowly, about 8 feet from the ground. On account of its slow speed it had been the regular practice at this factory to replace the belt when necessary without stopping the plant. Upon this occasion, however, an employee's arm was caught by the belting and his body came into contact with an adjacent beam, resulting in injuries producing death shortly afterwards.

It is interesting to note here that regulations now possible under the Factories and Shops (Amendment) Act, 1927, are under consideration with the object of enforcing much clearer control of moving machinery, and may include a proviso that no belt shall be replaced upon a moving pulley unless the prime mover is at rest.

Fractures in revolving circular saws seldom occur, as in most sawmills and other factories in which they are used they are subjected to vigilant examination. An exception occurred during the year at a firewood mill, where the occupier himself proceeded to cut firewood with a circular saw which had not been in use for some considerable time. The saw broke and a piece of it struck the operator in the chest with such force that his lungs were pierced with fatal results.

At a stone-dressing works a block of stone weighing approximately 3 tons had just been lowered to a planing machine when it slipped from the wooden chocks and fell upon the machine operator, crushing him to death.

A fatality of a somewhat similar character occurred at a large steel works. A piece of metal weighing approximately one ton was being landed by a crane in a waggon when one of the chain slings slipped off the load. The sudden release caused the end of the chain to fly back and it struck an employee a violent blow on the head causing his death.

At the same works an employee lost his life as the result of being severely burned by molten metal. At the time of the accident the metal was being poured into a mould from a 70-ton ladle swung from an overhead travelling crane. During the pouring, the ladle unexpectedly moved and the control lever of the overhead crane becoming fast at the same time the crane with its burden drifted along its rails. The deceased while running for shelter apparently became confused and ran in the same direction as the crane was travelling. The hot metal splashed all over him, setting his clothes alight and inflicting burns which ended in his death.

Of the non-mechanical accidents, two were occasioned by men being run down by trains within the precincts of a large factory. The evidence at the inquest adduced that there was a plenitude of warning signs at the crossings but the unfortunate victims who were on their way to work in the premises apparently took no heed of the approaching train.

A third railway accident at the same works cost another employee his life. He was uncoupling a truck from a locomotive when the former moved up suddenly, crushing him between the buffers of the truck and the locomotive.

Early int he year the door of a large vulcaniser at a rubber factory was blown off, causing pandemonium among the employees and inflicting much injury, including shock. Later in the year an employee while closing the door of another vulcaniser complained that he had strained his heart, which he claimed had been affected by the earlier accident. His death followed as the result of the dual injuries.

A man residing near a bakehouse was in the habit of visiting such premises to converse with the employees. During such a visit he went up to the flour-loft where an employee was passing flour down a shute. The loft was reached by means of a ladder and gave on to an opening about 4 feet square in the loft floor.

A little later a noise was heard and the visitor was found to have fallen through this opening to the bakehouse floor a distance of about eleven feet. His skull was fractured and he died the same evening in hospital. Regulation trap-doors were found provided at the loft opening, but these had been removed to allow the employee to proceed to the work he was doing in the loft.

At a dyeing and bleaching works a man employed as a chemist by some unaccountable means mistook a glass of cyanide for water and drank it, dying shortly after. Deceased was working in the laboratory at the time and the fatality occurred during the lunch hour. It was assumed that having partaken of his lunch and desiring a drink, he unfortunately lost his life through misadventure.

Means of Escape in Case of Fire.

The Factories and Shops (Amendment) Act, 1927, has greatly assisted administration respecting the alternative means of escape in case of fire. The onus is now placed upon the occupier to furnish to the Chief Inspector for approval two sets of plans and specifications of the means of escape in case of fire. On each set of plans the alternative means of egress from all floors in the building must be shown, and the Chief Inspector has been given power to retain one set for departmental filing.

The Amending Act also requires that the means of escape in case of fire shall be maintained in good condition. This is a distinct advance upon the requirements of the Principal Act in that previously no power to require maintenance was included, and the resulting cumbersome procedure to obtain overhaul and repair of an escape, where necessary, is thereby now avoided.

The great increase in building activity noticeable during the past several years was well maintained in 1927, and as a result there was constant inspectorial activity with respect to the provision of alternative means of escape in case of fire.

Many difficult problems arose occasioned chiefly by alterations of existing premises previously certified as complying with the Act, and in cases where buildings had been erected without any notification to the Department.

Wherever possible internal means of escape were required, and if structural conditions prevented this method, balcony landings or roof escapes giving access to adjoining buildings were given preference over external stairways.

A large number of visits were paid by Inspectors in company with the representatives of the Chief Officers of Fire Brigades, who rendered, as usual, valuable co-operation during the year, and certfied that in that period 124 factories were provided with satisfactory alternative means of escape.

Prosecutions.

During the year informations for breaches of the Factories and Shops Act and Regulations were laid in 59 cases.

Following are the details :—

		Convictions.	Dismissals.	Withdrawals.	Total.
Section.					
7	Being in occupation of unregistered factory	7	.....	1	8
20	Failing to keep premises in a cleanly state	3	.....	.....	3
26	Failing to provide seating accommodation	.....	.....	.....	.....
33	Failing to fence dangerous machinery	14	1	.....	15
38	Failing to report accidents	5	.....	.....	5
40	Employing child under 14 without special permission	1	.....	.....	1
41	Employing boy on prohibited machine	2	.....	.....	2
42	Employing female over 5 hours without meal interval	.....	.....	.....	.....
43	Breaches of overtime provisions	7	.....	.....	7
45	Employing children under 16 without certificates	13	.....	.....	13
46	Employing between 6 p.m. and 6 a.m.	3	.....	.....	3
49	Working or permitting work in furniture factories after hours	2	.....	.....	2
68	Failing to pay tea-money	.....	.....	.....	.....
Regulation.					
16	Failing to provide wash basins	.....	.....	.....	.....
23 (of 8/9/15).	Failing to provide suitable tools	.....	.....	.....	.....
25 (of 8/9/15).	Failing to clean room containing chlorate of potash	.....	.....	.....	.....
1 (of 10/3/16).	Failing to have boiler inspected	.....	.....	.....	.....
	Total	57	1	1	59

Factories and Shops (Amendment) Act, 1927.

The Factories and Shops Act. No. 39, 1912, as amended by Act No. 1, 1915, was further amended by Act No. 12, assented to 17th February, 1927.

The new features introduced by the latest Amending Act include registration fees, additional power to require ventilation, air change and air movement, and adequate floor space; regulation of dangerous and unhealthy trades; restrictions on employment (weights to be lifted or carried by hand by women or young persons); additional notice of accidents; first-aid ambulance chests; furnishing of plans and specifications of alternative means of escape in case of fire, and regulation of hours of employment, sleeping-places, &c., in Chinese and certain other furniture factories.

The obligations now placed upon factory occupiers to pay registration fees is in keeping with the practice adopted for many years in other States of the Commonwealth. The fees to be paid vary according to the number of persons employed, higher rates being charged where mechanical power is used.

During 1927 approximately £13,000 was paid in registration fees.

In addition to the payment of fees extensive power has been given the Chief Inspector to control the issue of registration certificates in certain circumstances subject to appeal to the Minister.

The amended section giving power to require additional ventilation, air change and air movement will allow of factories being brought up to the most modern standards with increased benefit to the welfare of employees. Air change and air movement are now accepted by all hygienic authorities as being essentials of factory life.

Whereas under the Principal Act prescribed cubical air space for each employee only could be insisted upon, power is now given to require floor space also as determined by regulation.

In England, America and some European countries certain dangerous and unhealthy trades have for many years been controlled by definite regulation and the Amending Act now being reviewed embodies such practice for this State.

A new section allows the Minister, where he is satisfied that any manufacture, process or description of manual labour used in factories is inimical to the health or safety of the persons employed, to make such regulations as appear to him to be reasonably practicable, and to meet the necessity of the case.

Regulations have already been issued governing the manufacture of electric accumulators, and others for the control of the generation, transmission, distribution, and use of electricity have been prepared, but have not yet been Gazetted. Other regulations to operate in the manufacture of rubber, lead and lead products, and other unhealthy industries are also being prepared.

Additional restrictions upon the employment of women and young persons are provided by a new paragraph which prescribes the maximum weights which may be lifted or carried by hand by such persons.

In adopting the standards prescribed, certain precedents were followed, but in practice it has been proved that some modification is required to meet conditions in which the lifting or carrying by hand of weights is intermittent rather than continuous. The matter is now receiving attention.

Under the Principal Act it was only necessary for factory occupiers to report accidents causing loss of life or injury caused by machinery moved by mechanical power, or by explosion, molten metal, escape of gas or steam, &c., and so disabling any person employed in a factory as to prevent his returning to his ordinary work in the factory within forty-eight hours of the occurrence of the accident,

In the new section the foregoing requirements are maintained, with the addition that accidents caused by electricity must be similarly reported as well as any accident due to any other cause which the Minister specifies by order published in the Gazette, and which causes such disablement as aforesaid.

It is also required that any accident, not otherwise covered by the section so disabling a person employed in a factory as to prevent him from returning to his work in the factory within seven days, must be also reported.

The latter requirement has involved a very large number of reports, with correspondingly increased investigations by the factory inspectors.

Another new section requires factory occupiers, unless exempted by the Minister, to provide a first-aid ambulance chest, appliances and requisites, to be installed and maintained as required by regulations.

The necessary regulations having been prescribed and gazetted, ambulance chests are now being provided in accordance therewith, with advantage to the employees.

The extraordinary expansion of industry has involved the erection of many new factory premises as well as alterations giving greater height to buildings already erected. This creates an urgent demand that the standard of safety of life and limb from fire risk must be well maintained.

Towards this end new subsections have been inserted definitely requiring that, not only must alternative means of escape in case of fire be provided, but also that they must be maintained in good condition. The latter proviso now enables the factory inspectors to have all alternate means, particularly external, kept in thorough repair and well painted against the weather.

It is now also provided that two sets of plans and specifications of the means of escape in case of fire shall be submitted by the occupier to the Chief Inspector for approval, one set of which shall be retained by that officer. On each set of plans it is required that the alternate means of egress from all floors of the building shall be clearly shown.

The unsatisfactory conditions found to exist in Chinese furniture factories, and the unfair competition resulting therefrom, disclosed that more drastic control was necessary. In consequence a new section was inserted which definitely provides that in Chinese and other furniture factories employment is only allowed between stipulated hours. In Chinese factories the hours are between 7·45 a.m. and 5·30 p.m., Mondays to Fridays, inclusive, only. No Chinese may work in a factory or permit any person whomsoever to perform any work of any nature whether connected with the business of any such factory or not outside such hours, or on Saturdays, Sundays, or public holidays at any time whatever.

In the case of persons other than Chinese employed in preparing, manufacturing, or assembling articles of furniture, the restrictions as to working or permitting to work, are similar, though the hours of permitted work are between 7·30 a.m. and 6 p.m., Mondays to Fridays, inclusive, and 7·30 a.m. to 1 p.m. on Saturdays.

No Chinese is now permitted to prepare or to partake of meals, board, lodge, or sleep on the premises of a building of which a furniture factory forms part, nor be upon or in any building or curtilage of a building used as a furniture factory except when he may lawfully work there.

Provision is made, however, that in any Chinese factory in which at least six workmen are employed, one person may be upon such premises outside lawful working hours for the sole purpose of acting as a watchman.

The occupier of a furniture factory may not use or allow to be used as a sleeping-place any portion of such factory.

The term "Furniture" is now clearly defined in the Act.

WALTER I. TAYLOR,
Chief Inspector of Factories and Investigation Officer.

FACTORIES AND SHOPS ACT, 1912.

SECTION 62.

Boiler Regulations.

Annual Report.—Period January–December, 1927.

The Departmental Engineer reports as follows :—

Accredited Inspectors.

Applications Made and Certificates Granted.—During the year twenty-five (25) persons made application for the Minister's Certificate of Approval to inspect boilers and Other Pressure Vessels installed in factories, twelve (12) being granted and certificates issued. At the end of the period under review 220 persons were granted the Minister's Certificate. In order to clarify the list of accredited inspectors, circular letters evidenced, by replies received, that 164 persons desired to have their names retained as being available for inspection duty, and as per list attached.

Certificates Cancelled.—In pursuance of the Boiler Regulations, the Minister ordered the following certificates to be withdrawn and cancelled :—

Certificate No.	*Date of Issue.*	*To whom Issued.*	*Date of Cancellation.*
32	9–12–1916	Thomas F. Smith	11– 4–1927.
126	17– 8–1917	Edward S. Budrodeen	2–11–1927.

Boiler Inspection.

Reports in connection with the inspection of boilers and other pressure vessels numbering 7,745 were lodged by accredited inspectors as follows :—

	Reports received.		
	Boilers.	Other Pressure Vessels.	Total.
Prescribed Reports:—			
First Inspections	435	706	1,141
Re-inspections	2,798	3,186	5,984
Total	3,233	3,892	7,125
Non-prescribed Reports:—			
Internal	620	.....	620
Grand Total	3,853	3,892	7,745

There were 435 boilers and 706 pressure vessels newly installed and 212 boilers and 140 pressure vessels discarded or placed out of commission.

The number of the various types of boilers and other pressure vessels inspected, discarded, and newly installed are given in the subjoined table :—

	First Inspection.	Re-Inspection.	Total.	Discarded.	Newly Installed.
Boilers—					
Cast-iron Sectional	9	40	49	.....	9
Colonial	97	764	861	40	87
Cornish	7	110	117	22	7
Egg-ended	.....	3	3	.....	.....
Jackass	2	24	26	3	2
Lancashire	6	94	100	4	6
Locomotive, including Portable Traction, and Road Rollers.	105	456	561	33	105
Marine Wetback	.....	3	3	.....	.....
,, Dryback	3	37	40	.....	3
Multitubular	12	210	222	13	12
Vertical	160	645	805	79	160
Water-tubes	26	397	423	17	26
Wolff	.....	1	1	.....	.....
Other Steam Generators	8	14	22	1	8
Total	435	2,798	3,233	212	435

Types of Boilers and other Pressure Vessels Inspected, &c.—*continued.*

	First Inspection.	Re-Inspection.	Total.	Discarded.	Newly Installed.
Other Pressure Vessels—					
Air and Water Receivers	282	618	900	46	282
Autoclave Presses	3	23	26	.....	3
Calenders, including Mangles	21	123	144	2	21
CO_2 Cylinders and Purifiers	17	134	151	1	17
Coolers	.....	3	3	.....	.....
Copper Coils and Pipe Heaters	5	92	97	1	5
Cylinders, Drying Drums, and Boilers (Steam Heated)	26	233	259	.....	26
Desiccators	.....	3	3	.....	.....
Digestors	16	86	102	17	16
Economisers	.....	8	8	.....	.....
Hot Tables—Presses, Drying Tables, Cantilever Presses, Patching Tables.	36	228	264	5	36
Jacketed Vessels...	84	922	1,006	24	84
Monteju and Crystallisers	3	24	27	1	3
Oil Receivers	5	.....	5	.....	5
Retorts	8	51	59	11	8
Steam-heated Rolls	.....	.....	.....	.....	.....
,, ,, Vessels	31	192	223	6	31
Steam Separators	.....	4	4	.....	.....
Sterilisers	.....	6	6	.....	.....
Stills	3	17	20	5	3
Stout and Wine Butts	.....	57	57	.....	.....
Sugar Driers	.....	.....	.....	.....	.....
Superheaters	.....	2	2	.....	.....
Vacuum Vessels	2	13	15	.....	2
Vegetable Steamers	.....	1	1	.....	.....
Vulcanisers	164	346	510	21	164
Total	706	3,186	3,892	140	706
Grand Total	1,141	5,984	7,125	352	1,141

Explosions.

There were four explosions reported and investigated during the year, as follows:—

A portable type boiler exploded at a sawmill situated at Brown Mountain, *via* Nimmitabel; fortunately no person being injured. The crown of the firebox fractured along the full length of the fillet of flange of the front plate at right angles to the direction of the crown girders. The crown was forced down to an angle of about 75 degrees from its original position, in so doing tearing the firebox side plates. The explosion lifted the boiler and hurled it 50 yards in the direction of its setting and wrecked the building under which it was housed. The explosion was caused through the faulty construction of the firebox crown girders in not being made long enough to transmit the downward force to the vertical plates, thereby submitting the fillet of the plate to a bending strain, setting up grooving which developed to such an extent that the plate finally fractured.

2. A cap of a front header of a Babcock and Wilcox boiler was blown off owing to a bolt drawing through the internal clamp. The cap struck the cast-iron door and broke a portion off, otherwise no further damage ensued.

3. An air receiver, about 4 feet long by 17 inches diameter, with cambered ends, made of steel plates and welded throughout by the oxy-acetylene process, was installed new in a tyre retreading factory for supplying air under pressure of 150 lb. per square inch and used for inflating pneumatic tyres. Some eighteen months later on (6th January, 1927) the shell was observed to leak at the welded longitudinal seam about midway of its length. Repairs were effected by further welding of the seam by the oxy-acetylene method. The next morning the receiver exploded with such force that the shell plate, $\frac{3}{16}$ inch thick, was not only straightened out but bent in the opposite direction to that of its original cylindrical form. The top end was projected upwards knocking a large hole in the ceiling. From the statement given upon inquiry it appears that the air compressor, which was not fitted with an automatic cut-off device, was started up by one of the firm in the morning as usual, and left to build up pressure without further attention. Shortly afterwards the explosion occurred, but fortunately no one was injured by the mishap, no person being near the cylinder at the time. On testing the safety valve by hydrostatic pressure, 170 lb. per square inch was applied before the valve lifted off its seat, or 20 lb. higher than the pressure for which the cylinder is said to be rated. The immediate cause was undoubtedly due to the defective welding done on the cylinder, and this should be a warning to the makers and users alike that the welding done on these appliances should be properly executed.

4. A vulcaniser in a City rubber works exploded, no person being seriously injured thereby, but a number of girls employed in the factory suffered from shock. Departmental investigation showed that a new asbestos joint had been provided and upon the closing of the door a number of the locking bars did not properly engage; upon internal pressure being applied to the vessel these slipped from position and permitted the door to be forced open violently.

Notices Served upon Factory Occupiers.

Notices numbering 218 were served upon factory occupiers to ensure compliance with the requirements of the Boiler Regulations as per the following summary :—

	Boilers.	Other Pressure Vessels.	Total.
Blow-off cocks	1	....	1
Casing in lever safety valves	.....	.....	.....
Cocks between check-valve and boiler	1	.....	1
Direct spring loaded safety valves	11	17	28
Feed pumps	.....	.....	.....
Fusible plugs	7	.....	7
Injectors	.....	.....	.....
Isolating valves	.....	.....	.....
Pressure gauges	12	20	32
Reducing valves	.....	20	20
Safety valves to be locked	6	20	26
Test cocks	4	.....	4
Valve on steam connections	.....	.. ...	.....
Water gauges	5	.....	5
Water Gauge-glass protectors	9	1	10
Unclassified	56	28	84
Total	112	106	218

Factories and Shops Act, 1912—*Regulations for the Inspection of Steam Boilers, &c.*

Accredited Inspectors.—31st December, 1927.

In accordance with the provisions of clause 5 of the Regulations of the 10th March, 1916, made under section 62 of the Factories and Shops Act (published in *Industrial Gazette*, vol. 9, p. 815), the Minister has approved that the persons whose names appear hereunder may make inspections and carry out all other necessary duties pertaining to the application of such Regulations.

The names appear in groups, comprising persons resident in Sydney and Suburbs, Newcastle and district, and country centres, respectively.

Sydney and Suburbs.

Cert. No.	Name.	Address.
190	Adamson, D. J.	21 Dartbrook-road, Auburn.
75	Allen, J. A.	"Dokotoh," Cheltenham and Beecroft roads, Cheltenham.
182	Allum, S. C.	54 Charlotte-street, Ashfield.
131	Archer, C. S.	Chaleyer-street, Rose Bay.
91	Ausburn, C. H.	39 Hawthorne-parade, Haberfield.
4	Banyard, T. R.	c/o L. Hinks & Co., Ltd., Engineers, 2 O'Connell-street, Sydney.
204	Barron, W. N.	"Narani," President-avenue, Brighton-le-Sands.
214	Bartlett, H. J.	c/o Department of Labour and Industry, George-st. North, Sydney.
217	Bell, A. C.	6 Wood-street, Ashfield.
172	Bennett, G. T.	"Penryn," Sutherland-crescent, Darling Point.
17	Bernard, T.	17 Lenore-street, Five Dock.
9	Berry, J. H.	c/o Royal Insurance Co., corner Spring and Pitt streets, Sydney.
221	Booth, H. C.	5 Dudley-street, Haberfield.
166	Brighton, E. J. B.	77 Glenmore-road, Paddington.
233	Butler, N.	Pittwater-road, Gladesville.
213	Campbell, A.	Russell-avenue, Lindfield.
105	Campbell, A. N.	c/o Tooth & Co., Ltd., George-street West, Sydney.
181	Chapman, F. J.	37 Dolphin-street, Randwick.
62	Chapman, G.	26 Clara-street, Erskineville.
109	Christie, J.	Woodburn-road, Lidcombe.
76	Clarkson, E. J.	"The Hut," Seaview-street, Balgowlah.
161	Coleman, J. H.	32 Paisley-road, Croydon.
21	Connie, P.	275 Henderson-road, Alexandria.
189	Connie, W. F.	275 Henderson-road, Alexandria.
236	Crouch, E. E.	20 Napier-street, North Strathfield.
224	Danks, J. R. W.	"Rawhiti," 9 Keir-avenue, Hurlstone Park.
216	Darbon, W. A.	8 Young-street, Sydney.
212	Davies, A. J.	11 Foucart-street, Rozelle.
28	Davis, C. E.	50 The Avenue, Granville.
180	Davis, H. C.	29 Hayden-street, Mosman.
230	Dempster, G.	Christie-street, St. Leonards.
153	Denovan, C.	89 Lyons-road, Drummoyne.
199	Dobson, A. J.	12 Tenilbra-road, Northbridge.
218	Donaldson, D. A.	20 West-street, Five Dock.
240	Donaldson, W. J.	6 Slade-street, Crows Nest.
211	Donnelley, N. S.	42 Dening-street, Drummoyne.
92	Duncan, J.	Queensland Insurance Co., Sydney.
53	Elder, Wm.	6 Dalley-street, Sydney.
186	Fairclough, C. S.	63 Booth-street, Balmain.
202	Ferguson, W. J.	12 Glover-street, Paddington.
19	Fielder, J.	N.R.M.A., 30 Grosvenor-st., Sydney.
206	Fogarty, J.	90 Ben Boyd road, Neutral Bay.
226	Fowler, C. E.	"Palmiston," Carnarvon-st., Auburn.
50	Fraser, H.	"St. Kilda," 10 Allister-st., Cremorne.
222	Frye, F. T.	41 Chaleyer-street, Rose Bay.
49	Fox, F. C.	351 Kent-street, Sydney.
219	Garrow, P. M.	"Rosslyn," Alice-street, Lakemba.
223	Gleeson, Michael	496 Darling-street, Balmain.
2	Gregory, R.	Walton-crescent, Abbotsford.
124	Hall, S. G.	25 Moore-street, Lilyfield.
31	Hastie, J.	Joseph-street, Ashfield.
38	Hastie, J. N.	Department of Labour and Industry, Sydney.
52	Hopkins, E. J.	760 Botany-road, Alexandria.
134	Hosking, W. J.	67 Day-street, Sydney.
235	Hughes, C. S.	"Taikoo," Warrigal-street, Turramurra.
29	Hunter, A. H.	Woolwich-road, Hunter's Hill.
205	Kennedy, J. M.	56 Kellett-street, Darlinghurst.
227	Keogh, R. J.	53 Green's-road, Paddington.
228	Kirkcaldie, W. K.	"Yallanbee," Greenwich-road, Greenwich.
93	Kirkwood, D.	18 Leopold-street, Croydon.
154	Lawson, D.	30 Thompson-street, Mosman.
1	Lawson, J.	Queensland Insurance Co., Pitt-street, Sydney.
187	Lewis, A.	"Macsbury," Cook-road, Lindfield.
232	Lyall, F.	"Sorrento," Abbotsford-road, Abbotsford.
191	Martin, A. E.	"Bretley," Kerr's-road, and Tilba-street, Lidcombe.
193	Mason, A. B.	Department of Labour and Industry, Sydney.
22	Mason, H. D.	25A Pitt-street, Sydney.
7	Massey, G.	Post Office Chambers, Pitt-street, Sydney.
39	McDonald, T. W.	"Durham," Rosebery-street, Mosman.
5	McLardy, J. R.	Broderick-street, Balmain.
94	McRoberts, H. A.	Queensland Insurance Co., Pitt-street, Sydney.
51	McSwiney, J.	Union Assurance Co., 14 O'Connell-street, Sydney.

Cert. No.	Name.	Address.
	Sydney and Suburbs—continued.	
86	Membrey, H. A.	85 The Avenue, Granville.
208	Miller, A. H.	Department of Labour and Industry, Sydney.
44	Mitchell, D.	66 Railway-street, Lidcombe.
10	Mitchell, S. M.	Mercantilo Mutual Insurance Co., 14 Martin-place, Sydney.
77	Morrison, A.	Pearson-street, Balmain.
174	Nicholls, W.	c/o R. Wildridge & Co., 76 Pitt-street, Sydney.
12	Nicoll, G.	24 The Crescent, Homebush.
68	Oliver, R. K.	48 Warrane-road, Willoughby.
115	Orchard, A. E.	"Harbour View," 2 Lookes-avenue, Balmain East.
225	Pain, E. O.	129 Livingstone-road, Marrickville.
188	Pearson, E. W.	60 Premier-street, Marrickville.
215	Ranch, J.	c/o Department of Labour and Industry, George-st., North Sydney.
67	Rawson, C.	32 Jamieson-street, Sydney.
121	Reeks, R. W.	12 Renwick-street, Drummoyne.
234	Reid, J.	15 Shakel-avenue, Concord.
162	Reynolds, L. J.	82 Pitt-street, Sydney.
229	Richards, R. D.	780 Military-road, Mosman.
42	Rodgers, S. D.	"Dalmeny," 17 York-road, Centennial Park.
175	Russell, R.	The Avenue, Granville.
45	Savage, J.	36 Tweedmouth-avenue, Rosebery.
30	Scott, J. J.	10 Alma-street, North Sydney.
150	Shaw, T. E.	Box 1649, G.P.O., Sydney.
85	Sinclair, J.	19 Ballast Point road, Balmain.
132	Sinclair, W.	97 Pitt-street, Sydney.
209	Smeal, K. H.	8 Hazelbank-road, Wollstonecraft.
220	Smiles, W.	7 Iredale-avenue, Cremorne.
171	Smith, H. D.	"Malua," Fisher's-avenue, Vaucluse.
89	Smith, J. M.	Peacock Point, Balmain.
208A	Smith, W. H.	"Carinya," Burns-crescent, Chiswick.
111	Stephenson, W. F.	2 Hunter-street, Sydney.
128	Stevenson, G.	Point-road, Northwood.
58	Stobo, S. E.	Moree-street, Gordon.
88	Stowe, F. E.	54 Young-street, Sydney.
118	Stronach, J.	Ewenton-street, Balmain.
15	Tate, A. S. W.	Kelsyn Flats, Beetha-road, Neutral Bay.
210	Taylor, C.	"Bangor," Raven-street, Gladesville.
239	Teape, G. J. P.	Hay-street, Croydon.
66	Thomson, J. Sted.	33 Macquarie-place, Sydney.
13	Totolos, A.	35A Rangers-road, Cremorne.
16	Treffone, D.	50 Holmwood-street, Newtown.
207	Turner, C.	"Wirringilla," Susan-st., Randwick.
46	Vyle, C.	14 Jones-street, Pyrmont.
231	Walker, W. A.	11 Fanning-street, Tempe.
238	Wallace, J. D.	29 Cabarita-road, Cabarita.
178	Weeks, T. E.	"Avergue," Parramatta-road, Haberfield.
160	Wildridge, A. H.	76 Pitt-street, Sydney.
14	Wildridge, R.	76 Pitt-street, Sydney.
83	Williams, A.	29 Tressider-avenue, Haberfield.
	Newcastle and District.	
117	Cameron, T.	11 Rowan-street, Merewether.
100	Clegg, W. E.	c/o Lorna and Bridge sts., Waratah.
158	Craig, H.	23 Janet-street, Merewether.
125	Dalby, G. W.	47 Mitchell-street, Stockton.
56	Dick, Jas.	20 Fitzroy-street, Mayfield.
74	Dick, Wm.	Fern-street, Islington.
104	Ellis, R. G.	Kerr-street, Mayfield.
200	Gray, T. G.	"The Billows," Carlisle-st. Stockton.
127	McIntyre, J. P.	Robert-street, Mayfield.
87	Morrison, D. N.	c/o Morison and Bearby Ltd., Carrington.
113	Nairn, A. C.	54 Church-street, Newcastle.
11	Rodgers, J. E.	Church-street West, Newcastle.
73	Taylor, A.	19 Hudson-street, Hamilton, Newcastle.
237	Rodgers, R. N.	Church-street West, Newcastle.
	Country Districts.	
	North.	
98	Ratcliffe, J. R.	Rouchel-road, Aberdeen.
198	Wearne, Wm.	Emmaville.
168	Gaukroger, F.	Tingha.
119	Brazenall, E.	Hillgrove.
	North Coast.	
102	Wood, E. H.	Crane-street, Ballina.
78	Issacs, A. R.	c/o Colonial Sugar Refining Co., Ltd., Broadwater, Richmond River.
71	Smith, E. W.	Coff's Harbour Jetty.
59	Mathews, T. B.	c/o Colonial Sugar Refining Co., Ltd., Condong, Tweed River.
114	Frewin, F. A.	31 Prince street, Grafton.
184	Wilson, J. A.	Harwood, Clarence River.
152	Cliff, R. C.	c/o Kempsey Electric Light and Power Supply Co., Ltd.
57	Guthrie, A.	Clay's Laundry, Lismore.
65	Woodley, E. H.	Victoria-street, Taree.
	South.	
70	Hargreaves, R. S.	"Keira," Cootamundra.
33	Coutts, H. K.	Town Hall, Goulburn.
70	Stevens, E. R.	Pumping Station, Tenandra, Gundagai, Junee, Wagga.
	South Coast.	
80	Laing, T.	North Araluen.
82	Harrison, G.	Kinghorn-street, Nowra.
140	Noble, J.	Kinghorn-street, Nowra.
35	Jones, S. C.	c/o Electrolytic Refining Co., Ltd., Port Kembla.
103	Sharp, J. W.	Keira-street, Wollongong.
	West.	
84	Bennet, T. G.	c/o Department of Labour and Industry, Broken Hill.
164	Giffin, J.	Proprietary Mine, Broken Hill.
169	McAskill, A. W.	Junction Mine, Broken Hill.
201	Reece, T. A.	Electric Light Works, Broken Hill.
163	Woolcock, H. A.	325 William-street, Broken Hill.
107	Allibon, H.	Deniliquin.
197	Clark, J. C. B.	15 Hayley-street, Lithgow.
26	Parker, E.	Hassan's Walls road, Lithgow.
...	Donovan, D.	Canonbar, via Miowera, Nyngan

The following companies have on their respective staffs persons holding the Minister's certificate of approval to inspect boilers, &c., under the Boiler Inspection Regulations :—

Atlas Assurance Co. Ltd., Sydney.
Australian Alliance Assurance Co., Sydney.
Australian Mutual Fire Insurance Society Ltd., Sydney.
British Equitable Assurance Co. Ltd., Sydney.
City Mutual Insurance Co. Ltd., Sydney.
Colonial Mutual Fire Insurance Co. Ltd., Sydney.
Commercial Union Assurance Co., Sydney.
Co-operative Insurance Co. of Australia Ltd., Sydney.
Eagle, Star, and British Dominions Insurance Co. Ltd., Sydney.
Employers' Liability Assurance Corporation Ltd., Sydney.
Farmers' and Sottlers' Co-op. Insurance Co. of Australia Ltd., Sydney.
Federal Insurance Co. Ltd., Sydney.
Insurance Office of Australia Ltd., Sydney
Liverpool and London and Globe Insurance Co. Ltd., Sydney.
London Guarantee and Accident Co. Ltd., Sydney.
London and Lancashire Fire Insurance Co. Ltd., Sydney.
Manufacturers' Mutual Accident Assurance Assn. Ltd., Sydney.
Mercantile Mutual Fire Insurance Co. Ltd., Sydney.
New Zealand Insurance Co. Ltd., Sydney.
North British and Mercantile Insurance Co. Ltd., Sydney.
Phoenix Assurance Co. Ltd.
Queensland Insurance Co., Sydney.
Royal Exchange Insurance, Sydney.
Royal Insurance Co. Ltd., Sydney.
Southern Insurance Association Ltd., Sydney.
Standard Fire and Marine Insurance Co. of New Zealand Ltd., Sydney.
Sydney Fire Office Ltd., Sydney.
The South British Insurance Co. Ltd., Sydney.
Union Assurance Society Ltd., Sydney.
Union Marine Insurance Co. Ltd., Sydney.
United Insurance Co., Ltd. Sydney.

Metropolitan District.

This district is bounded by a line drawn from the sea through and including Helensburgh, thence westerly just south of and including Menangle to a point just north of Burragorang, thence north-easterly to a point east of Rooty Hill, thence north-westerly to and including Kurrajong Heights, thence north-easterly to a point just west of and including Martinsville, thence easterly just north of Morisset to the sea.

It embraces the whole of the county of Cumberland excepting that portion south of Helensburgh, and includes the southern portion of the county of Northumberland.

It is well served by all forms of modern transport, and covers an area of approximately 2,690 square miles.

There are upwards of 7,000 factories registered within this area, which, for administrative purposes, is divided into twelve districts.

Mr. Superintending Inspector Armitage reports :—

During the past year I was principally engaged in assisting the Chief Inspector reviewing instruction cards and reports of inspectors relating to duties performed by them, and the examination of plans for the building of new factories and the alteration of old premises. My outside direct inspectorial work was very limited, and was more particularly directed to the construction of fire escapes installed in some very old buildings.

In regard to the building of new factories there is a tendency, while the prices of city property are rising, to go further afield to the outer suburbs. The movement of the metropolitan factory area is from the west to the east side, due, in a certain degree, to the construction of the City Railway.

The introduction of the Amending Act relating to the payment of registration fees raised many questions as to whether or not various premises which had formerly been registered as factories were within the definition of "Factory," and also as to whether certain operations performed were sufficient to bring within that definition the premises in which these operations were carried on. Considerable time was absorbed in making inquiries and obtaining necessary facts in order that these difficulties should be properly presented for legal advising.

I might mention that this year has seen the completion of a building for the housing of a large newspaper printing establishment. In addition to the latest modern equipments from a hygienic point of view, there is also added a staff room with a cafeteria, on the roof, with every convenience for perfect service.

Mr. Superintending Inspector Huntley reports :—

Resuming my customary duties at Head Office at the commencement of the year, after fifteen months' absence at Broken Hill, special attention was given to domestic changes anticipated and later realised under the Amending Factories Act, with satisfactory results.

Certain field duties which, under new arrangements, were apportioned to me were interrupted by the volume of work necessary to be performed for the Chief Inspector, and my time was very fully occupied. A considerable portion was allotted to the preparing of regulations pertaining to the generation, transformation, distribution and use of electrical energy in factory premises, and in preparing regulations requiring the provision and maintenance, in certain factory premises, of ambulance chests. The preparation of these regulations required considerable research, but the task was accomplished in satisfactory order.

I also took part in the Conferences anent the above convened by the Chief Inspector and attended by representatives of the employers, employees, and the Department.

Two Inspectors' Conferences were held during the year at which addresses were given and papers read by several distinguished visitors as well as by members of the inspectorial staff. In order to properly maintain the papers read and addresses given at these Conferences a special file was prepared and properly indexed in order that any information required upon any of the subjects introduced and discussed may be quickly obtained. (It would seem desirable that any address or paper submitted to Conference and approved should be published in the *Industrial Gazette*.) It is not too much to say that the Conferences have steadily improved in quality, and that much of the business transacted thereat is worthy of reproduction.

Towards the end of the year an Australian Manufacturers' Exhibition was held at the Showground, Sydney, and it being decided that the Chief Inspectors' Branch should be represented, it fell to my lot to arrange and supervise an exhibition of machines and models of machines, with approved guards affixed, fencing construction, electrical safeguards, fire protection, hygienic seating and cupboards, models of safety steps, sanitary appliances, hygienic drinking fountains, large-framed photos depicting machinery guarding and welfare work in factories, and photos of factory exteriors, and safety posters, &c.; and as a result the Branch was given a very satisfactory position in the Awards by the judges—a gold medal and certificate being gained. In this work, which occupied some time, I received excellent assistance from Mr. Inspector Middlemiss especially, and from other inspectors selected as demonstrators.

It was generally admitted that the Exhibition by the Branch was very appropriate and of value to the community. Upwards of 11,000 persons visited our display.

The museum of models in the Branch was extended as a result of the Exhibition; and it would, in my opinion, be helpful to factory occupiers and employees if greater space were allotted within the building to allow of a better display of these valuable and instructive models.

The Inspectors' Library received additional publications during 1927, and steps were taken at the close of the year to arrange for a thorough revision to be made, with the object of bringing the library more up-to-date by the inclusion of additional publications appropriate to the work of the Branch.

Mr. Superintending Inspector Dunleavy reports :—

During the year I was appointed as a Superintending Inspector, and carried out some special duties in respect to the instructing and arranging of work for new inspectors, and also duties in respect to conciliation.

I was also given special duties in connection with the supervision of Chinese factories which, owing to the Amending Act of 1927, required special attention.

Under the old section of the Act, Chinese were allowed on the premises under certain conditions. Most of the Chinese had their meals and slept on the premises, but the advent of the Amending Act necessitated the alteration of these conditions. Some of the sleeping conditions previously existing were deplorable, and drastic alterations were required.

In company with Inspector Durack, I visited the whole of the Chinese factories in the city and suburbs, and was surprised to find the unsatisfactory conditions in which some of the Chinese occupiers and workmen worked and lived. In some cases we received the co-operation of the municipal authorities in the districts concerned, and had to condemn some of the premises in those districts as being unfit for factory occupation. In many other cases owners were required to carry out structural alterations to bring the premises into conformity with the Act. In most of the factories the necessary alterations have been carried out.

A number of Chinese occupiers who neglected to accept advice were, after repeated warnings, proceeded against for occupying premises that could not be registered under the Amending Act. The majority of the Chinese occupiers made every effort to conform to the new conditions, although I find there is a tendency to carelessness when supervision is relaxed. The result of the Legislation has been to improve the conditions of the Chinese furniture factories generally, and to insure that furniture is manufactured under reasonable hygienic conditions.

Registrations.—A number of new factories were registered in my district during the year, including a number that had changed ownership.

Sanitation and Hygienic Conditions.- The conditions relating to this portion of the factory work received every attention. The sewerage system has been extended to some of the outlying portions of my district, assisting materially in this work.

Accidents.—I am very pleased to report that no fatal accidents occurred in my district during the year. Some minor accidents occurred.

Bakehouses.—Bakehouses have received my attention, and instructions were given to a number of occupiers to carry out limewashing, &c.

Certificates of Fitness.—In a few cases instructions were given to occupiers to obtain certificates of fitness for persons under 16 years of age. I find that there is more attention given to this phase of the Act by occupiers than in previous years.

Fire Escapes.—This phase of factory work still requires constant vigilance, especially in the older type of building, and with the co-operation of the Fire Brigades officers a number of owners and occupiers were instructed to have fire escapes erected or repaired and painted.

Fencing of Machinery.—Many occupiers were given instructions to fence dangerous machinery, and in some cases where neglect was obvious, proceedings were taken against occupiers and fines were inflicted.

Boiler Regulations.—A few cases came under my notice where occupiers had to have their attention drawn to the non-observance of the boiler regulations.

Mr. Inspector Armstrong reports :—

Registrations.—During the year applications for registration of factory premises were fairly numerous, although the major portion were confined to changes in occupancy. For some time there has been a strong tendency to extend the city industrial area, and quite a number of new factories are taking the place of old cottage terraces, especially in Chippendale and Redfern. It is pleasing to note the superior type of factory now being erected in comparison to the older buildings vacated.

Structural Alterations.—In the newer buildings I did not find it necessary to issue instructions for structural alterations to any extent. This duty was possibly obviated by architects submitting plans to the Department for review before building. On the other hand, however, it was found necessary for the Minister to issue instructions on several occasions to occupiers to provide alternative means of escape in case of fire. Had the plans of these buildings been submitted for inspection, a considerable expense would have been saved the owners of the buildings.

Sanitation.—Generally speaking, the sanitary conditions in factories was satisfactory, although it was found necessary to instruct many occupiers to pay more attention to the cleanliness of conveniences.

Fencing of Machinery. Constant vigilance was again necessary to ensure the safe working of dangerous machines, and, although I found that in most cases guards had been provided for machines, I had on many occasions to instruct occupiers to renew the guards, and particularly to exercise their control in compelling employees to use the guards provided.

Accidents.—With the advent of the Amending Act, investigations into the causes of accidents increased beyond all expectations, and many factories which in past years were practically free from accidents requiring report under the original section had to notify numerous accidents. This was particularly noticeable in the wire-working, confectionery, and gas-making industries. A number of accidents produced by moving machinery were investigated, and in two instances occupiers were prosecuted and fined for permitting lads under 16 years of age to work at prohibited machines.

Overtime.—A considerable amount of overtime worked was reported, particularly from occupiers of foodstuff factories which handle seasonal products, and when investigations were made it was found that the provisions of the Factories and Shops Act had been observed.

Certificates of Fitness.—This very necessary and important section of the Act was neglected by many occupiers who, however, remedied their neglect when the matter was brought under their notice. In one instance, where the occupier had previously been warned by me, and failed to profit by same, proceedings were instituted and a fine inflicted.

Bakehouses.—Most of the bakehouses visited were kept in conformity with the Act, but it was frequently necessary to remind occupiers that they were under a statutory obligation to limewash bakehouses at least once in every six months.

General.—I am pleased to report that there is a general desire on the part of employers and employees for better, brighter, and more hygienic conditions in factories, and feel sure that better results will be obtained in every way from improvements in hygienic standards.

Mr. Inspector Durack reports :—

During the year a large portion of my time has been occupied on industrial prosecutions before the Court of the Chief Industrial Magistrate—a goodly part in connection with the registration and inspection of Chinese factories outside my district, together with general investigations of private Employment Agencies throughout the Metropolitan area—yet I was able to visit over 80 per cent. of the factories in my district on more than two occasions; and these were factories where power machinery has been in use, the balance, 20 per cent., were those where machinery was not in use and where few person employed.

Registrations.—With the exception of four motor garages, very few new premises have been erected. These premises are of a modern type, and in every instance have been up to the standard required by the Act and Regulations.

Fencing and Guarding of Machinery.—I paid very close attention to this part of my inspectorial work, and where fences and guards were not up to the modern standard of efficiency directions were given, and proper and approved guards were provided forthwith.

Sanitation.—This matter had my very careful attention, and during the year several orders were given to occupiers for alterations and additions to premises, and, in many cases, orders for the erection of new and up-to-date w.c. accommodation. Seating accommodation, a copious supply of good drinking water, and provision of dressing rooms had a good deal of attention; thereby securing wholesome surroundings for those working in and around the factory.

Accidents.—During the year there were several accidents of a minor nature, but I am glad to state that there was no very serious accident, and no fatal accident happened during the year.

Fire Escapes.—This section of the Act occupied much time, many factories being visited in company with the Metropolitan Fire Brigades officer. In many instances we found the doors leading to the fire escape locked, and passage-ways blocked with goods and other material. Orders were given to have the doors unlocked and passage-ways cleared, and, on a future inspection, we found our orders had been attended to and the fire escapes efficiently maintained.

Bakehouses.—The conditions in bakehouses throughout the district were, on the whole, satisfactory. In a few instances I had provision made for better sanitary conditions, and the elimination of smoke and steam by means of hoods and flues. Additional air vents were also provided.

Certificates of Fitness.—A number of directions were given to occupiers during the year to obtain certificates of fitness for all persons under the age of 16 years. At a later inspection I found that these certificates had been procured in every instance.

Overtime.—The requirements of the Act and Regulations in respect to overtime were fairly well observed.

Mr. Inspector Henstock reports :—

Registrations.—New registrations included a number of large factory premises in both city and suburbs, indicating a substantial growth of industry. In Granville and Auburn the new factories comprised extensive rubber tyre works, linoleum manufacturing, electrical appliances, and a large works for oil refining by the cracking process.

Structural Alterations.—The growth of factory operations in city premises has brought about some extensive alterations, additional floors and general reconstruction being necessary. Both in altering and constructing new buildings, the submitting of plans and general co-operation by owner and architects with the Department helped greatly towards improved conditions. In several instances special ventilating and air systems were installed regulating effectively the temperature of the factory. This, in particular, applies to rubber vulcanising and confectionery factories.

Sanitation.—Conditions were fairly well maintained in the city, but in the suburban districts the pan system still leaves much to be desired; a sewerage system is still an urgent necessity. Lime-washing and instructions under Regulations require constant attention.

Fencing of Machinery.—Occupiers generally have complied with the Regulations fairly well, and with a much improved type of fencing and guards. When installing new machinery metal guards are now being adopted, which enables a greater degree of safety to be maintained; also the direct motor drive to machines eliminates much of the risk of accident arising from belting and mill gearing.

Fire Escapes.—Several fire escapes were completed and approved during the year, and many instructions were given for maintenance, repairs and painting, keeping passage-ways clear, &c. As a precaution for safety in two large factories, sprinklers have recently been installed, also systems of fire drill.

Accidents.—I regret to report that three accidents occurred in my district, causing injuries with fatal results. An explosion occurred in a still in an oil-refining factory, causing the top half of the still to be carried away, including brick insulations, &c. Three employees, who were in the vicinity of the explosion, received such severe burns and shock that one died immediately and the others a few days later.

An accident occurred to an employee at a brick and roofing tile works. He was holding a belt clear of overhead shafting in motion prior to placing same on pulley, when he lost his balance and his arm being caught in belting he was dragged round the shafting. The arm was severed and both legs fractured; he died later at the local hospital.

An accident occurred at a large engineering works, where an employee, engaged in the machine shops, sustained internal injuries and shock, including fracture of both legs and an arm. It appears that whilst passing between two lathes, his clothes caught on a projecting steel rod revolving in one lathe, whirling him round several times before the machine could be stopped, his legs and body striking the adjoining lathe; he later succumbed to his injuries.

Bakehouses.—Close attention was given to general upkeep and cleanliness. Instructions were given for periodical lime-washing. Two new bakehouses were built in suburbs, and large extensions were made to city bakehouses. In one a mechanical oven was installed.

Certificates of Fitness.—The regulations were generally observed, but in some instances the employees had failed to bring certificates from previous employer. Where instructions were given they were usually carried out forthwith.

Mr. Inspector Middlemiss reports :—

Registrations.—An average number of new factories were registered during the year. It is noteworthy that the tendency to move from old buildings in congested city areas to specially built factory premises in suburban areas usually results in greatly improved working conditions.

Hygienic Conditions.—It is satisfactory to record a marked appreciation of the value of improved lighting, posture comfort, and better standards of natural ventilation. At the same time, it is necessary to remember that the increase in the number of new and varied factory processes, calls, in my opinion, for a further number of industry regulations.

Bakehouses.—Bakehouses generally tend to improve as more modern methods are applied. The use of oil fuel tends to increased cleanliness, but should be carefully watched in view of possible hazards relating to incomplete combustion of oil or to explosions where inflammable oil gas is present.

Accident Prevention.—No fatal accidents occurred in my district during the year. Careful study and attention were given to the application of approved standards of fencing and guarding to suit the many varying circumstances encountered.

The departmentally approved power-press guard, manufactured locally, referred to in my last report, has been fitted to a number of machines and has given satisfactory results.

Though, as stated in previous reports, the standard of safeguarding consistently improves, there is, in my opinion, as yet insufficient appreciation of the permanent injury and economic loss to society directly attributable to avoidable accidents. The evolution of an increasing number of approved standard guards and methods of safe practice, and the compulsory application of them by regulations framed under the Amending Factories and Shops Act, should assist in the prevention of a large number of accidents. The effective value of such regulations will undoubtedly depend on the measure of co-operation accorded by employers and employees.

It is believed that an extension of departmental publicity methods by the issue of informative pamphlets would greatly assist inspectoral work in accident prevention.

Machinery Committee.—During the year I assisted several times at the sittings of the Machinery Committee when many matters of importance were introduced.

General.—During the year, and arising out of the Amending Act, I assisted in the forming of new regulations, and took part in conferences convened by the Chief Inspector and consisting of representatives of employers and employees' associations and of the Department.

The preparation of the regulations occupied some time and required considerable research.

Towards the end of the year I assisted in arranging the display made by the Chief Inspector's Branch at the Australian Manufacturers' Exhibition held at the Sydney Show Ground.

A full description of such display and its results has been printed in the *Industrial Gazette.*

Mr. Inspector Nolan reports :—

During the year under review my factory districts included the area in the City from Bathurst-street to the Central Railway Station, and the Eastern Suburbs.

Registrations.—A large number of registrations were dealt with during the year, but they were mostly connected with factories where changes in ownership occurred. A large cigarette-making factory was closed in the City and the business transferred to a near suburb, where a modern factory was erected.

Structural Alterations.—Structural alterations were found necessary at a number of factories, and instructions were issued to have necessary alterations carried out. In every case the work was undertaken without hesitation, and in no case was it found necessary to have a Minister's Order served.

Sanitation.—Close attention was paid to matters under this heading, and where necessary instructions were issued to have walls limewashed and factory premises generally kept in a cleanly condition.

Fencing and Guarding of Machinery.—At all factories visited particular attention was paid to the fencing of mill-gearing, and the fixing and maintenance of approved guards on dangerous machines.

Two fatal accidents occurred in my district during the year. The first happened to a man employed as a washhouse hand at a steam laundry. On the day of the accident the deceased mounted a ladder to place a small belt on an overhead pulley. Whilst standing on the ladder he leaned against the overhead shafting, when his clothes became entangled in the shafting, and he received injuries which terminated fatally two days later.

The second fatal accident befel a man at a bakehouse. The deceased was not employed at the place, but was in the habit of visiting the bakehouse and conversing with the employees. On the day of the accident the deceased followed an employee into the loft over the bakehouse and was standing near a stairway opening when he lost his balance and fell through the opening to the ground level. His skull was fractured and he died shortly after being admitted to the local hospital.

Fire Escapes.—At all factories where registrations were sought and alternate means of escape in case of fire were found necessary, the matters were reported to the Fire Brigades Department, and action was taken to see that the recommendations from that Department were carried out. Inspections were also made to see that all approaches and exits were kept free from any obstructions. A number of instructions were issued to occupiers to post notices directing attention to exits, &c.

Bakehouses.—The standard of cleanliness at the bakehouses visited was found to be satisfactory. At a number of places instructions were issued to have walls limewashed and floors cleaned.

Overtime.—A number of notifications were received respecting overtime worked by juveniles, and subsequent investigations disclosed that the necessity arose through rush orders.

Certificates of Fitness.—During tours of inspection at the factories investigations were made to see that all juveniles held the necessary certificates. In a number of cases where children applied for certificates, but were found to be under age, the matters were followed up and adjusted.

Boiler Regulations.—At all factories visited where boilers and vessels under pressure were used inspections were made to see that the necessary certificates had been obtained within the required periods.

Mr. Inspector Ogilvie reports:—

During 1927, I carried out inspectorial work in a Metropolitan District also in the North-western Country District. As a result of the working of the country district combined with my metropolitan district my visits to factories in the latter area were limited.

Registration of Factories.—As a result of the amendment of the Factories and Shops Act a large number of registrations were dealt with, but in most cases the registrations referred to change of ownership. In many cases it was found that occupiers had registered under the Firms Act and were ignorant as to the requirements of the Factories and Shops Act. . Another trouble met with was the payment of the registration fee for the factory premises. Several small occupiers refused to pay the registration fee, but when attention was directed to the definition of a factory as set out in the Act the payment was made forthwith. A further trouble was the amount of fee paid at date of registration. On many occasions it was found that the number of hands had been increased to a larger number than that paid for. When requested to forward additional fee objection was taken, but when the matter was fully explained the difficulty was overcome.

Structural Alterations.—I did not find it necessary to serve instructions under this section of the Act.

Overtime.—A certain amount of overtime was worked by males under 16 years of age in the hat and confectionery industries, but on no occasion was application made for an extension of the overtime provisions.

Fire Escapes.—Attention was given to fire escapes, and where necessary alternative means of escape approved of by the Chief Officer of Fire Brigades were provided.

Fencing of Machinery.—This requirement of the Act still necessitates much vigilance on the part of inspectors. In the best regulated factories machines are found without the necessary guards being provided. As mentioned in previous reports the fault, on many occasions, has been on the part of the employees, although many occupiers recognise the fact that they must police their own factories and endeavour to comply with section 33.

Accidents.—I am sorry to report two fatal accidents in my district.

At a large wire nail and netting factory an employee was filling some oil cups at a distance of about 16 feet from the floor level when the ladder he was standing on slipped from its position. In trying to save himself from falling he made a sudden grab at a rafter and missed. His clothing, which was of a loose nature, then became caught in the revolving shafting. He was whirled around the shafting and then thrown to a concrete floor. When picked up from the floor the only clothing he had on was a pair of boots.

At a dyeing factory a chemist was testing water in the laboratory with a mixture of cyanide. At the time of the testing he also had a glass containing drinking water which was on the bench in the laboratory. Unfortunately he drank the mixture containing cyanide in mistake for the drinking water.

At an upholstering factory an employee was sharpening the lags of a teasing machine when one of the iron bands at the end of the drum became loose and struck him on the right arm with such force that the arm was severed at the elbow joint. As the method of sharpening the lags was of a crude nature, inquiries were made at other factories as to the precautions adopted when sharpening the lags, but in all cases it was found that no precautions were taken. To prevent accidents of a similar nature arrangements were made for fencing to be fitted to the machine when the lags are being sharpened. The fencing has been found to be satisfactory, and I understand that such fencing will be enforced in factories carrying out similar work.

At a large joinery works an employee aged 16 years was working at a circular saw when he had occasion to go to another part of the factory. Instead of proceeding by a passage-way he forced his way through some timber and returned the same way. As he was approaching the machine he placed his right hand forward so as to steady himself and in doing so his hand came in contact with the teeth of the saw, resulting in the loss of parts of four fingers. At the time of the accident a guard was fitted to the machine.

At the same joinery works an employee aged 15 years was tailing out at a planing machine when he met with an accident. Action was taken against the occupier under section 41. As the boy was employed at removing the timber from the bench, after it had passed through the machine, to the floor the occupier contested the case, but a conviction was obtained.

Other accidents of a minor nature were investigated.

Sanitation.—Of great importance to the general cleanliness of a factory is the prompt and efficient removal of all rubbish, sweepings, &c. In a number of factories it has been noticed that incinerators have been installed, which facilitate the work of destroying all waste matter.

General.—At a factory in the metropolitan district an occupier commenced business with the production of "streamers" used to speed parting friends who depart for other lands by ship. From producing coloured streamers for farewelling purposes it was an easy step to confetti, and then the mind of the occupier went to paper tapes for telegraph instruments, recording machines of all kinds, stay paper and paper cap making. The latest machine installed produces stay paper and gum paper rolls of any other description. It is heated with hot air and gas, and its weekly capacity is 5,000 rolls of sealing and stay paper, each 800 feet long. This gummed tape is excellent for the sealing up of parcels, and firms have their names and addresses printed on the rolls thus giving them the advertisement that all business people naturally wish to have. The use of gummed tape is increasing vastly, and I understand that the occupier is making preparations to produce all that is likely to be required.

There is also installed a paper-slitting machine, which is used for the cutting of telegraph tapes and the finer work. It is also used for the cutting of the treated paper which will later and elsewhere be turned into drinking straws for use in refreshment shops where soft drinks are retailed.

The machines are semi-automatic and merely require human attention to supply the paper and remove the rolls as they are cut and coiled. A crinkled paper machine is also installed.

There is a big demand for this crinkled paper and the machine makes it perfectly. A new addition to the plant which is not yet in operation is a machine for the printing of stay paper in two colours and for the production of dockets and tickets of all types and classes in either rolls or sheets.

Senior Inspector Miss Harriott, B.A. reports :—

Registrations.—During the year the number of factories cancelled in my district exceeded those registered by thirty-seven, a rather unusual state of affairs.

Thirty-three firms moved from old premises to more up-to-date buildings in other areas,while eighty-three went out of business or ceased to come under the Act. This large number of cancellations was due to the operation of the Amending Act under which a yearly registration fee is now payable, and employers whose numbers did not bring them within the definition of a factory desired their premises to be cancelled where previously they remained on the factory list—in order to avoid the trouble of re-registration should increased numbers make it necessary. The fee due being proportionate to the number of workers engaged the necessity of checking the payments made give added work to the inspector.

Structural Conditions.—Structural alterations were carried out in many instances, and several premises were brought into conformity with the provisions of the Act.

Sanitation.—On the whole, a great improvement is noticeable in the standard of cleanliness in present day factories, due no doubt to the educative value of the work of inspectors as well as to the improved class of buildings in which factories are now housed.

A suburban factory on application for registration was found to be carrying on work over a stable in which about fifteen horses were stalled. Registration was only granted after the removal of the stable. In a small jam factory, I found several girls working in wet clothing due mainly to faulty methods adopted in washing the outside of glass jars. The floor was repaired and a better method of doing the work was instituted, with the result that the girls' clothes no longer became soaked with water.

Overtime.—Six applications for extension of overtime were investigated by me during the year and permission granted in each case. The provisions of the Act in regard to overtime were generally well understood and few breaches occurred.

Certificates of Fitness.—Only four applications by girls under 14 for permission to work in factories were granted on my report. Several girls under 16 years of age with certificates granted by Medical officers for light work only came under my notice this year, one with serious heart trouble.

Certificates such as these throw great responsibility on the inspector and require careful consideration.

General.—The Amended Act which came into force early in the year includes a section setting a limit upon the weight that females and young persons under 18 years of age shall be allowed to lift or carry by hand. Observation leads me to the belief that the injurious practice of lifting heavy weights is not as frequently found now as formerly.

In a flour packing factory, however, I saw girls lifting weights over the prescribed limit. As soon as the facts were pointed out to the manager steps were taken to prevent a recurrence of the breach.

A factory engaged in making fancy articles from celluloid was found in a bad condition and received special attention. The yard was littered with scraps of this highly inflammable material and a naked flame was used in the workshop for boiling water. It is remarkable how dangers which are apparent even to the uninitiated can be ignored by persons who become familiar with them. It is cases like this that call for unceasing vigilance on the part of the Inspectors.

A special report was made by me on the stiffening of straw hats in millinery workrooms. This until lately, was a factory process, the work being done by men by means of a solution of gelatine, but owing to the growing fashion of shaping hats to suit individual tastes, combined with a great influx of hoods (unstiffened straw shapes) from Europe and Japan, the stiffening is now largely carried out in millinery workrooms by means of a nitro-cellulose solution.

This preparation has an overpowering smell which is very noticeable even in well ventilated premises, while in some of the smaller workrooms the air becomes most oppressive through its use. Most of the stiffening used is manufactured locally and I understand that the solutions do not contain any harmful toxic properties, but, as there are a number of imported brands on the market in which it is admitted that such dangerous solvents as acetone, methyl acetone or wood alcohol may be used, it is necessary to keep a close watch over the process, in view of a possible toxic effect from fumes.

The ventilation of rooms in which any form of this stiffening is used should be ample, with openings low enough to carry off the heavy gases.

An additional danger lies in the inflammability of the preparation. This appears not to be fully recognised by employers. In one large workroom, I found an open jar of the solution within two feet of a naked gas flame. In another a tin of solution near a gas ring used for heating water; while in an ill-ventilated room (not under the Factories Act), the air of which was filled almost to suffocation point with fumes from the preparation, the proprietress was in the habit of curling her hair with tongs heated at the open flame of a spirit lamp.

It is most necessary that employers and employees should be fully instructed as to the dangers of the process, and a careful watch kept with a view, if necessary, of promulgating regulations to deal with the subject.

Inspector Miss Brown reports :—

Registrations.—In the large areas under my supervision, applications for registration were very numerous throughout the year. In several instances re-arrangement of existing registrations was rendered necessary owing to the imposition of registration fees under the Amending Act, 1927. Many applications, however, were for re-registration of previously occupied premises. A number of entirely new buildings were also included, specially built to suit industry requirements.

Structural Alterations.—Outstanding among above newly registered factories, is a suburban food packing factory, well constructed and ventilated, practically fire-proof, of quite satisfactory dimensions, with ample provision of natural lighting, but I found, on inspection, that the w.c. accommodation provided for female employees on ground floor opened flush on to an adjoining cart dock. Fortunately for the

occupier, the building was still incomplete—that fact, however, did not prevent the necessary alterations being somewhat costly. Had the plans been submitted to the Department such an error would have been immediately rectified.

In another factory, where considerable attention had been given even to details—a four-storied structure—the concrete stairways throughout had been completed with handrail and middle bar only as protection against accident. I pointed out to the manager the potential accident risk, and served an order that heavy mesh wire be attached from handrail to steps, such order being promptly complied with.

Several other new factories, constructed on modern lines—the prominent features of which are natural lighting (where practicable), good ventilation, practically fire-proof construction, and all sanitary requirements provided of a high standard covered the following industries, viz., Telephones and Wireless Accessories, Knitting, Confectionery, Boots and Shoes, Upholstery, and Chemicals packing. In these comfortable dressing rooms are included; and in many up-to-date dining accommodation is also provided fitted with stoves for cooking purposes, and, in a few instances, furnished also with ice-chests.

In addition to above improved conditions of construction, many minor additions, alterations and entire renovations have been effected to premises for which re-registrations have been applied for, thus bringing them more into conformity with present standards.

Sanitation.—Fairly satisfactory conditions were maintained respecting regular cleansing, but the careless occupier is still with us and needs constant supervision, and, with various excuses offered, some still neglect to carry out prescribed limewashing of interior of premises until reminded of their obligations, however remedial orders are usually promptly complied with. In one suburban boot factory I found very dirty conditions, despite previous warning—proceedings were taken against this occupier, resulting in a fine of £2 and costs. In some other cases warning letters were sent to offending occupiers.

By persistent effort, ventilation generally has been considerably improved, particularly in the older types of buildings occupied, and originally not intended for factory premises.

Overtime.—A considerable amount of overtime was worked during the year—mostly within prescribed limits and duly recorded and notified to Department. In some cases where breaches were detected warning letters were sent, but in a suburban metal-working factory I found that several female employees had been working excessive overtime during a week, including Saturday and Sunday work. Action was taken in two cases, resulting in fines of £2 10s. and 12s. costs in each case.

In a city knitting factory in the case of several employees excessive overtime had been worked over a considerable period in contravention of the terms of section 46, Hours of Working, and successive days had been flagrantly disregarded, and in addition no record in prescribed form was kept and no notifications of same sent to Department. Proceedings taken in three cases resulted in fines of £3 and 9s. 6d. costs in each case.

Many occupiers have ceased working their employees overtime, preferring to engage extra hands, or even refuse rush orders, rather than impose the strain of overtime.

I investigated eleven applications for extensions of overtime during the year,—the majority being in the printing industry—other industries involved being white work, fur-working and ice-cream manufacturing. As on investigation adequate reasons were shown in justification, the necessary permission was granted.

Certificates of Fitness.—Although, generally speaking, the provisions of this section are carefully observed by occupiers, I found several serious breaches, notably in a suburban millinery workroom. Several females were employed without certificates of fitness having been obtained. Action was taken in three cases and a fine of £1 and 11s. costs was imposed in each case.

In two printing factories, a cardboard box factory, and a brush-making factory I found similar breaches, and proceedings resulted in similar fines and costs in all cases.

In a few instances I found certificates issued by certifying doctors to girls over 14 years of age showing special need that they be required to do "light work" only, and on visiting the factories where they are employed was in every case able to ensure that special conditions would be extended to them in their work.

I investigated fifteen applications for permits under section 40 for Minister's special permission for girls under 14 years of age to work in a factory—of these one was withdrawn; in the remainder inquiry disclosed than many were very near the required age, and in others that the family circumstances were such, caused either by unemployment or sickness of the breadwinner, that the Minister granted the applications.

I also found, in a city bakehouse, that a boy considerably under 14 years of age was employed without a certificate in terms of section 40, no application having been made, and investigation disclosed that his circumstances did not justify any such application; he subsequently returned to school. Action was taken against this employer, and a fine of £1 and costs resulted.

Laundries.—During the year fairly good conditions were maintained in my areas, general cleanliness and periodical lime-washing being fairly well attended to. In some few cases necessary orders served were complied with promptly. I usually warn the employers concerned in the sorting and handling of this class of work of the risk of infection involved, and impress on them the necessity for attention to personal hygiene. Invariably I find that a good supply of disinfectant is kept on hand and fairly liberally used.

Welfare Work.—Notwithstanding the observance of the Forty-four Hours Act, privileges such as the provision of morning tea and, in some cases, afternoon tea, are still maintained in many factories, the necessary time being allowed for same.

Dressing and dining rooms, where provided, have been well maintained, and occasionally one has the pleasure of observing additional comfort provided for employees; any suggestions offered with that end in view are usually adopted by reasonable employers. I have noticed in several factories fairly good circulating libraries installed and maintained in very good order, and, judging by the registers, much appreciated by the employees concerned.

General.—Employment generally was fairly well maintained during the year in many industries, in fact in some only by the working of considerable overtime were they able to keep pace with orders; but during the latter half of year knitting, shirtmaking and some clothing factories evidenced a good deal of slackness, for which the employers concerned blamed the large importations of overseas goods, and, in a lesser degree, the vagaries of local weather conditions.

Skilled machinists were very much in demand—so many more industries are now open to women that the supply is not nearly equal to the demand. In average-sized factories there is a tendency to employ older girls or women, even at higher wage cost, rather than use time in teaching younger employees.

The imposition of registration fees for the first time, under the amending Act, met with rather a mixed reception, and incidentally added considerably to my work.

I assisted in some research work towards securing information for compiling new regulations in connection with the amending Act.

Inspector Miss Grace Scobie, O.B.E., reports:—

Registrations.—As in past years change of occupancy accounted for the majority of the 106 registrations handled by me during the year 1927.

Two buildings of outstanding note were erected in one outlying suburb coming within the ambit of my supervision, and were subsequently registered for factory purposes.

Structural Alterations.—In one of the largest steam laundries situated within the city area, and employing on an average sixty women, a scheme of re-construction was carried out which transformed entirely the working conditions of all concerned. The scheme provided for additional and extensive means of ventilation, dressing and dining rooms, and other comforts.

Two instances of overcrowding came under my notice during the year. In each case structural alterations were immediately carried out in order to comply with the statutory requirements as to air-space.

In quite a number of factories structural alterations of a more or less minor character were found to be necessary.

Hygiene.—In a large wet condiment factory working conditions were found to be very unsatisfactory. Wet floors, the result of defective drainage, proving a constant source of complaint. This necessitated the reconditioning of the floors whilst work was in progress.

For the comfort of twenty women engaged peeling onions in a shed attached to this factory I was instrumental in having fires provided. Several oil drums containing charcoal fires were placed down the centre of the shed, between the workers. This gave great satisfaction to the women concerned. As the structure was an open shed I was satisfied that there could be little likelihood of the workers being affected by charcoal fumes.

Another cause of complaint in this factory was the fumes arising from the use of sulphurous acid used in bleaching onions. For convenience of handling the bleaching process is carried out inside the bottling department. The physical discomfort occasioned by the fumes was very real indeed.

In order to control (or attempt to) the fumes at their source, the firm constructed—at my suggestion, and at considerable cost—a hood extending the length of the barrels in which the bleaching process takes place. This hood is provided with ducts which connect with the outer air. By this means the fumes have to a great extent been controlled.

In many millinery establishments, some employing a number of girls, and others employing a few, the use of chemical compounds for stiffening various kinds of straw hats increased considerably during 1927.

In workrooms, where the means of ventilation provided was all that could be desired under ordinary circumstances, it was found that the fumes arising from the use of these compounds filled the atmosphere with a nauseating odour. The fire hazard was also considerable.

In all those workrooms where I found this stiffening process in operation I devoted careful attention to means of ventilation, and insisted upon reasonable precaution being taken against fire.

Overtime.—Nine investigations were made by me during the year in connection with applications for extension of overtime. The industries so applying included printing, felt hat manufacturing, corset making, cordial manufacturing, and carpet sewing. Following inquiry and report the application was granted in each instance.

Certificates of Fitness.—In the course of routine visits made during the year I was careful to note all certificates of fitness of children under 16 years of age employed in the factories coming under my supervision. Over the same period I made inquiry into and reported upon twelve applications for special permits for girls under the age of 14 years. In each case inquired into the necessitous circumstances of the family concerned warranted the issuing of the permit.

General.—During the early part of the year I visited the South Coast District, accompanied by the male inspector for the district. A tour of inspection was made of all the principal factories employing female labour. Special inquiries were made by me into alleged excessive weight-lifting by female employees attendant upon certain machines. After careful inquiry I was convinced that no girl was required to perform any duty detrimental to her physical well-being.

I was called upon during the year to investigate certain compensation claims made by two young women. One had been employed in a dressmaking workroom, and the younger of the two had been employed as an examiner of coloured silk underwear. In both cases the claim was that ill-health was due to conditions of employment. In neither case did the evidence support the claim.

By direction of the Chief Inspector I made a survey—towards the end of the year—of the medical and nursing service provided voluntarily by factory occupiers in the metropolitan area.

In view of the manifold difficulties which encompass our struggling industries I consider the achievement in this direction decidedly noteworthy.

Inspector Miss Stuart-Robertson reports :—

Registrations.—Registrations were numerous in the large city area over which I had supervision during 1927.

The erection of new buildings suitable for the housing of small factories was welcomed, and these buildings were readily occupied, also several remodelled buildings.

Structural Conditions.—Structural conditions continue to improve. Two large business houses have erected work-rooms on floors above their retail shops, and special attention has been given to natural lighting and ventilation. Provision for natural lighting is receiving much closer attention by builders.

Sanitation.—Owing to expansion in industry, and the consequent increase in staffs, I have found deficiencies in closet and lavatory accommodation, and same were remedied with much difficulty, owing to structural conditions.

In one large clothing factory it was found that structural conditions were unfavourable to the erection of three additional W.C.'s, rendered necessary by the increase in staff, and the occupier removed to new premises, where the requisite accommodation was provided. In the new buildings almost the maximum of sanitation has been reached, but in the old buildings the greatest vigilance is necessary, as from foundation to ceiling there are defects which, if not counteracted by constant cleaning, lime-washing of walls, and attention to the repairing of bad floors, &c., much sickness would probably result.

Overtime.—A considerable amount of overtime was worked, but strictly in accordance with the provisions of the Act. Employers are realising that excessive overtime adversely affects the output, both in quantity and quality.

Certificates of Fitness.—The majority of occupiers, especially in the large factories, adhere strictly to the provisions of Section 45, but many occupiers in the small factories are very careless in this connection.

General.—Employment has been fairly well maintained in stock clothing factories, but a good deal of slackness exists in the order trade of men's and women's clothing.

The straw hat trade has received a serious set-back by the importation of cheap straw hoods, which are blocked by junior girls in the millinery work-rooms.

Inspector Mrs. Duncan reports :—

In addition to the work performed by me in the Metropolitan district under my charge, I also visited Newcastle and Cessnock several times during the year.

Registrations.—A large number of new registrations were dealt with, including transfers. Several new and up-to-date factories were erected in the Waterloo district in which sanitary conditions and ventilation were all that could be desired for the comfort of the employees.

Overtime.—A good deal of overtime was worked during the year, particularly in the printing and confectionery trades. In some instances the limit had been reached and a further extension was granted by the Minister.

Sanitation.—Many notices were served on employers in regard to sanitary conditions, chiefly in smaller factories. In the larger factories much care and attention is given to sanitary arrangements.

Certificates of Fitness.—Many applications under section 46 were investigated by me during the year. In many cases where the family income was not sufficient to provide the bare necessities of life, I recommended to the Minister that the applications be granted. Other cases came under my notice where there was sufficient income to maintain the home in comfort, and on my recommendation these applications were refused.

In several instances I found children under 16 working without permits, and on bringing the matter under the notice of the employer, the same were procured without delay.

General.—Employment was well maintained in the clothing trades. In knitting factories a slack time was experienced.

One new industry was opened up in my district.

Generally speaking, I find that the majority of employers are willing to accept any advice offered, which will tend to improve conditions.

Newcastle District.

This district is bounded by a line extending from the sea opposite Morisset to a point just north of Martinsville, thence south-west to a point north of Wiseman's Ferry, thence north-westerly to and including Cassilis, thence north-easterly to and including Werris Creek, thence easterly north of Nowendoc and Comboyne, thence southerly to and including Cundletown, thence easterly to the sea.

It is served by the main northern railway line and its branch to Merriwa, and by the North Coast railway line.

There are approximately 1,200 factories registered within this district which covers an area of approximately 15,500 square miles.

The Department has a branch office at Newcastle where three inspectors are stationed.

Mr. Superintending Inspector Clark (Officer-in-Charge), Newcastle, reports :—

The position of officer-in-charge of the Newcastle district involves the performance of many duties and the supervision of activities distinct from inspectorial work under the Factories and Shops Act.

The growth of the Labour Exchange, the administration of food relief to distressed persons, and the information bureau necessarily occupies much of the officer's time and limits his inspectorial work.

Registrations.—The number of effective registrations was increased during the year, and the inspectorial work in connection therewith has been added to considerably by the incidence of the Amending Act providing for registration fees, which came into operation early in the year.

Structural Conditions.—Several new structures were erected during the year. One in particular, costing nearly £100,000 is replete with every modern requirement for the manufacture of ice-cream. It is of steel and concrete construction with five floors and every facility for the comfort of the employees, including rest rooms, recreation rooms, and bath rooms with hot and cold showers has been provided.

Another building is nearly completed for the manufacture of electric equipment.

A large engineering establishment have added considerably to the plant by the erection of some fine buildings for the construction of steel railway carriages for which they have large contracts.

A very fine plant has also been erected for the production of oxygen gas. These and many others show a high standard of building construction from the point of view of light, ventilation, and general comfort for the employees, as well as that of modern management.

Fencing of Machinery.—This important feature of an inspector's work was given close attention. The tendency generally in industry is to adopt higher standards of safeguards with a view of minimising or eliminating accidents, and the departmental suggestions for co-operation to this end are now more generally accepted by occupiers than has been the case hitherto.

Much, however, remains to be done. Plant is continuously being scrapped or remodelled. Methods of production change, and increased vigilance is necessary to cope with the many changes in industry and the subsequent dangers arising therefrom.

Accidents.—No fatal or serious accidents were reported in my district during the year. Those reported covered mostly minor injuries such as lacerations of fingers and hands, and burns.

Fire Escapes.—Several new fire escapes were erected during the year, each being approved by the Officer-in-Charge of Fire Brigades.

Overtime.—With the exception of the order tailoring trade, no overtime within the section was worked during the year. In this trade, at the Christmas period, there occurred the usual seasonal rush.

Certificates of Fitness.—The provisions of the Act in this respect were well observed during the year.

General.—The work of the Branch increased considerably during the year. On the Labour Exchange side, the demand has been tremendous, many thousands of men being registered for employment, owing to the activities of the Main Roads Board in its road development policy. The prospect of work in this district attracted many men from other parts of this State, and from other States. Food relief was administered, and everything reasonable was done to reduce distress.

The coal-mining industry is at present in a serious state owing, it is said, to want of trade, and many thousands of men in this industry are now, and have been for some time, unemployed.

The Branch generally has been of considerable public value to the industrial community in imparting information and creating an atmosphere for more effective co-operation in the discharge of the obligations imposed by the Acts administered by the Department.

Mr. Inspector MacCubbin (Newcastle) reports :—

During the first half of the year under review, I had the oversight of a Metropolitan District. During the remaining half-year, I was transferred from Head Office to a Newcastle District.

Registrations.—A number of new registrations were effected, but for the most part these were due to changes of occupancy. A number of cancellations were put through, which had the effect of maintaining the number of factories at normal.

Structural Alterations.—On no occasion was it necessary to adopt drastic measures to enforce the provisions of the Act in this direction.

Sanitation.—Generally speaking sanitary conditions are fair, and it is pleasing to note the increase of septic tanks where sewerage is not available. The pan system being in general use in the country districts, the same standard as that maintained where water closets are installed is difficult to obtain, but the matter receives the attention of the local Health Inspector in addition to our supervision. Serious cases of neglect are seldom met with.

Fencing and Guarding of Machinery.—This very important phase of the work received full attention and much progress has been made in the design and adoption of improved types of guards. The matter of maintainance is as formidable as ever. In two of the big industrial plants in my district each has a safety organisation functioning which is doing quite a lot to reduce the number of accidents to employees engaged in the industry. In order to promote the spirit of emulation among the different departments, safety bonuses are awarded every four-weekly period to the department showing the greatest progress in accident reduction for that period. This has proved effective in stimulating an interest in safety.

Accidents.—A number of fatal accidents were investigated and coronial inquiries attended during the year, only one of which came under Section 38. This fatality occurred on the pouring platform of the open hearth furnace where three ton ingots are moulded. The metal is poured into the moulds by a 70 ton ladle which is operated by an overhead travelling electric crane of 100 tons capacity. The steel rod which is connected to the stopper of the ladle burnt right through, and what is known as a " continuous pour " occurred. At the same moment the control lever of the overhead crane jambed which allowed the crane to drift in a westerly direction and the deceased whilst running for shelter away from the splashing molten metal, ran the same way as the crane was drifting, and the hot metal splashed over his body and set his clothes alight, inflicting injuries which resulted in his death. The finding of the Coroner was that the deceased died from shock in the Newcastle Hospital from burns accidently received.

In one case the occupier of a factory after receiving instructions to guard the gear wheels of a dough mixing machine, failed to do so, with the result that an accident occurred and the occupier was subsequently prosecuted and fined.

A number of minor accidents under Section 38 (d) were investigated.

Fire Escapes.—There were no new buildings erected in my Newcastle area which required alternative means of escape.

Bakehouses.—In all factories where foodstuffs are prepared, the provisions of the Act were rigorously enforced.

Certificates of Fitness.—In most instances this Section of the Act is well observed, there being only a few occasions when it has been necessary to issue instructions to obtain the necessary certificate.

Boilers.—These regulations have also been well observed. Only in a few cases was it necessary to instruct the occupier to have the boiler tested and exhibit the certificate under glass.

General.—No new industries were commenced in my district during the year. Much is being done by the goodwill and co-operation of employers and employees with a view to improving hygienic and other conditions with the result that the factories generally are on the up grade.

Mr. Inspector Young (Newcastle) reports :—

I was transferred from Head Office to Newcastle district on the 1st April, 1927, my district extending to Werris Creek and including the towns in the Maitland mining district.

Registrations.—I visited all the factories in my district. There were a considerable number of changes in ownership necessitating registrations and cancellations. No new industries were established during the year.

Fencing of Machinery.—I found the provisions of the Act and regulations well observed, and it was only in odd cases that I had to instruct the occupier to provide fencing. In some cases where fences were not effective or did not provide sufficient safety, I had them renewed and improved.

Sanitation.—Throughout the country district there is no sewerage system, and lavatories and drains required constant supervision to keep them in a satisfactory state. I had concrete floors and ventilators installed, and in some cases had to order washing out, disinfecting and limewashing.

Fire Escapes.—In two buildings new fire escapes were installed to the satisfaction of the Chief Officer of Fire Brigades. Escapes in existence were inspected and found satisfactory.

Accidents.—Accidents generally were of a minor character, a considerable number being under Section 38 (d) not caused by machinery or mill-gearing. One fatal accident occurred in a cordial factory at West Maitland. An adult male employee was bottling glass syphons with soda water, when a syphon burst, part entering his abdomen causing death from internal hemorrhage.

Bakehouses.—I found it necessary in many cases to direct occupiers to limewash premises and to generally attend to the cleanliness of the premises and utensils.

Certificates of Fitness.—I found that employers in factories where boys and girls under 16 years were employed procured the necessary certificates of fitness. In several cases where there was only one boy or girl employed the occupiers had to be directed to procure certificates, their excuse for not having done so being that they were not aware of such necessity.

North Coast District.

This district is bounded by a line extending from the sea to a point just north of Cundletown, thence northerly to a point east of Comboyne, thence westerly to a point north-east of Nowendoc, thence northerly to a point on the Queensland border north of Unungar, thence along such border eastwards to the sea.

It is served by the North Coast railway line and its branches to Dorrigo and Kyogle, the latter branch being now extended to connect with the Queensland railway line at Beaudesert.

There are approximately 600 factories within this district, which embraces an area of approximately 14,300 square miles.

The inspector who has charge of this district operates from the Head Office and visits all parts of it regularly.

Mr. Inspector Hastie reports :—

I remained in charge of the Northern Rivers District during the year. This district is operated from the Head Office with tours of inspection of eighteen to twenty-one days duration; between these tours I worked in the Metropolitan area.

Registrations.—During the year's operations, registrations were fairly numerous, although mostly confined to changes in occupancy. These changes necessitated cancellations, and were practically on a par with the registrations. The number of factories on the register at the end of the year was slightly increased.

During the latter half of the year, premises were registered as a factory in which the manufacture of broom handles was carried out; this is a new industry for the district and the timber being treated is obtained locally. The operations are on a small scale at present, but it is expected that the industry will develop into a large concern.

Sanitation.—This is a phase of the work that needs constant supervision, owing to the pan system that prevails in country districts. It is only in a few of the larger towns that a water sewerage system is installed. It is pleasing to note that some occupiers instal a patent disinfecting lid. Generally speaking, the sanitary accommodation was satisfactory and maintained in cleanly condition.

Fencing of Machinery.—This is a most important feature of an inspector's work, needing constant oversight. It is most gratifying to report that no trouble was experienced with factory occupiers in matters pertaining to the fencing and guarding of machinery; in fact, they were always ready to acquiesce in any suggestion or instruction given. An equally important feature is the maintenance of fences and guards. A machine may be due for repairs and the guards and fencing are removed to facilitate the handling of the machine. It occasionally happens that in the hurry to start up the machine again, the fencing and guards are forgotten for the moment, and it is at this time that an accident is most likely to happen. Fortunately this is not a frequent condition, and where it has come under my notice, on pointing out the responsibility, both to employer and employee, they acknowledged that they did not stop to think, clearly evidencing that education in "Safety First" principles is needed.

Accidents.—A few accidents were investigated during the year, but none were of a serious nature. Since the advent of the Factories and Shops Amendment Act, 1927, more accidents have been reported, owing to the wide scope of the section dealing with accidents. These were of a minor nature and were confined to sprains and strains, bruised legs and hands caused by falls or in striking objects whilst moving about in the workshop or mill.

Fire Escapes.—In the whole of the district under my control, there is only one factory where a fire escape is required, and this was maintained in conformity with the requirements of the Act.

Overtime.—There was only one application to work overtime, and the preseribed limitations were not exceeded. The firm making the application is engaged in the manufacture of "Lactogen," and has an extensive overseas trade as well as local.

Bakehouses.—These premises generally were found to be kept in eonformity with the Aet. Some of the occupiers did not limewash the walls and ceilings until instructed, forgetting the obligation placed upon them to have this necessary cleansing work performed at least once in every six months. It was necessary to also instruct some occupiers to repair floors; these, being of concrete, were broken near the ovens due to the dropping of firewood. In one bakehouse, extensive alterations were earried out, greatly improving light and ventilation.

Boilers.—The regulations governing boilers were well observed by occupiers, there being no neeessity to report any breaches. In reference to air receivers used extensively by motor repairing workshops, it was found neccssary to instruct the occupiers to obtain certificates from qualified inspectors for the vessels. The owners were ignorant of the Boiler Regulations under the Act, and, on being instructed, had the vessels inspected and the neeessary eertificates obtained.

General.—All main towns were visited twiee, and other towns onee, during the year. It is very satisfactory to find that factory occupiers generally are eager to assist the inspeetor in every way. They welcome his visits, and will readily carry out any suggestion for the betterment of conditions in the factory. Factory premises and conditions have greatly improved, especially sawmills. The new mills erected are built substantially, and in many instances the shafting is underground.

North-Western Distirct.

This district is bounded by a line drawn easterly from a point just north of Werris Creek to a point north-east of Nowendoc, thence north-easterly to the Queensland border at a point north of Unungar, thence westerly along that border to a point just south of Curriwillinghi (Q.), thence due south to a point about 16 miles north of Carinda, thence easterly and north of Pilliga to and including Bullerawa, thence south-easterly to a point just north of Tambar Springs, thence easterly to the point of commencement.

It is served by the main northern and north-western railway lines and branches.

There are approximately 550 factories registered within the district which covers an area of approximately 42,110 square miles.

Owing to the vacancy created by the retirement of the inspector formerly in charge of this district not being filled till the end of the year, arrangements were made for inspections therein by officers from the Metropolitan District.

Mr. Inspector Ogilvie reports :—

Although in eharge of a Metropolitan District I was called upon to make several visits during 1927 to portions of the North-Western District.

Registrations.—Several new registrations were effected and my time was fully occupied in explaining matters relative to the registration fees as provided by the Amending Factories and Shops Act. As a result current and outstanding fees were in most cases promptly forwarded to Head Office.

Fencing and Guarding of Machinery.—I found it necessary to direct occupiers, particularly of saw-mills, to more securely fence and guard machinery and mill-gearing. In many of these cases the plant had formerly been in work in another location, and upon its re-erection the fences and guards had not been properly replaced.

Bakehouses.—Those occupiers who had not attended to the lime-washing provisions were instructed to have this work carried out forthwith. Generally speaking, I found the bakehouses in a satisfactory condition.

Accidents.—No accidents of a serious nature occurred during the year.

Boiler Regulations.—I found these regulations to be well observed and had no oceasion to furnish any reports in connection therewith.

Amending Act.—I was careful throughout my tours to draw attention to the Factories and Shops (Amendment) Act, and instructed occupiers to exhibit a copy of same.

South Coast District.

This district is bounded by a line drawn from the sea to a point just south of Helensburgh, thence south-westerly but east of Braidwood and Araluen and westward of Bemboka to a point on the Victorian border south-west of Nangutta, thence along that border to the sea.

It is served by the railway line from Helensburgh to Nowra and by motor car services from that point southward.

This district contains 260 factories and covers an area of approximately 5,400 square miles.

The Department has a branch office at Woonona where the inspector in charge of the district is stationed.

Mr. Inspector Waugh reports :—

Registration.—A number of factories were registered during the year and there were many re-registrations. The Amending Act has caused occupiers to be more careful in supplying the number of their employees.

Sanitation.—A start was made during the year to instal a sewerage system at Woonona, but in other towns from Stanwell Park to the Victorian border the old pan system still prevails, and occupiers of factories have to be continually reminded of the necessity of keeping this type of closet in cleanly condition.

Accidents.—No fatal accidents happened in my district during 1927. Minor accidents happened both at work and in going to and returning from work, but these did not come under section 38.

Bakehouses.—The old type of bakehouse is fast disappearing, brick taking the place of wood. The requirements of the Act are now inquired into previous to building operations being commenced.

Certificates of Fitness.—Little trouble is now experienced with employers in the matter of obtaining certificates of fitness for employees under 16 years of age.

Boiler Inspections.—Occupiers of factories are now well aware of the fact that they must exhibit a certificate that the boiler has been inspected during the year. Where such certificates were not exhibited instructions were given to comply with the regulations, and reports on same forwarded to the Department.

Fencing of Machinery.—Occupiers of factories in which machinery is used are now fully alive to the fact that they must securely fence and guard all dangerous parts of same. Most machines in large works are now provided with guards before being operated.

General.—With the exception of coal mining, which has been seriously restricted by the use of oil taking the place of coal on the largest ocean-going vessels, all other trades and callings have worked fairly well, especially the building trades, which have been exceptionally brisk, and the outlook for the coming year is good.

At Port Kembla considerable progress has been made by a large company in building furnaces, railways, and erecting a jetty. At the present time this company employs about 380 men in this area.

Southern District.

This district is bounded by a line commencing south of Menangle and proceeding south westerly to a point about sixteen miles east of Braidwood, thence southerly and just east of Araluen to the Victorian border at a point south west of Nangutta, thence north westerly along that border to a point south west of Trigateran, thence northerly and just west of Kosciusko, Batlow, Cootamundra, and Stockinbingal but including these towns to a point just west of Garema, thence easterly just north of Grawlin Plains and south of Eugowra to a point just south of Perthville, thence southerly to Isabella and thence easterly to the point of commencement.

It is served by the Main Southern line with its branches to Bombala, Crookwell, Grenfell and Boorowa; the railway from Demondrille to Blayney with its branch line to Canowindra; the branch line from Cootamundra to Tumut and the connecting railway line from Stockinbingal to Parkes.

There are approximately 600 factories within this district which covers an area of approximately 25,030 square miles.

The inspector who has charge of this district operates from the Head Office and visits all parts of it regularly.

Mr. Inspector Wallace reports:—

Registrations.—A large number of registrations were dealt with, including a fair percentage of re-registrations.

Structural Alterations.—At Queanbeyan a bakehouse was reconstructed under my instructions and improvements were carried out in several factories.

Fencing of Machinery.—Instructions to securely fence machinery and provide efficient types of guards were served on a large number of occupiers. Generally the standard of fencing has improved.

Accidents.—I have to report one fatal accident to an occupier of a firewood cutting plant at Gundagai, being caused through a piece of timber jamming between the bench and the circular saw, which burst into several pieces, and one small piece penetrated the occupier's left lung. The circular saw was not provided with a guard, was very blunt, and was not fit to be used. The premises were not registered and occupier had only operated the plant for a short period.

An accident happened to a female employee whilst engaged in operating a flat ironing machine in a steam laundry at Bowral, when her right hand was burned. The accident was caused through the employee feeding material over the roller on the wrong side of the machine instead of feeding from the front side underneath finger guard; other accidents reported were of a minor nature.

Overtime.—Satisfactory conditions prevailed, and overtime was mostly worked in one women's and children's garment factory at Goulburn.

Certificates of Fitness.—It was only necessary in a few cases to give instructions under this heading.

Bakehouses.—During the year seven new bakehouses of good type were erected, viz; Bowral, 1; Cootamundra, 3; Quandialla, 2; Queanbeyan, 1. In each case the plans and specifications were submitted for Departmental approval. It is proposed to erect three more new bakehouses in the early part of the ensuing year.

General.—During intervals between tours I also made inspections in the metropolitan area. A large cement company has commenced the erection of cement works and a large electric light and power generating station between Moss Vale and Berrima. It is anticipated that the output of cement per annum will be 120,000 tons, consuming approximately 150,000 tons of lime stone from their Marulan Quarries. These works will absorb a large number of employees. Another company has erected their works near Berrima and are now producing 300 tons of high grade blue metal per week absorbing forty-four employees. It is expected to erect an additional unit to double the output, shortly.

South Western District.

This district is bounded by a line drawn from the Victorian border at a point south west of Trigateran proceeding northerly to a point just west of Tumblong thence to a point just south of Cootamundra, thence north westerly and across the railway line at Springvale and westerly of the Stockinbingal Parkes railway line to a point just west of Garema, thence north westerly to a point just south of Euabalong, thence south of the Broken Hill railway line to Tolarno, thence south westerly to Golgol on the Victorian border, thence easterly along that border to the point of commencement.

It is served by the main southern line with its branches to Lake Cargelligo, Hillston, Rankin's Springs, Westby, Hay, Tocumwal, Rand, Oaklands, Corowa, Tumbarumba, Holbrook and the railway line from Deniliquin to Moama.

This district contains approximately 650 factories and covers an area of approximately 54,280 square miles.

The inspector who has charge of the district operates from the Head Office and visits all parts of it regularly.

Mr. Inspector McEvoy reports. :—

Registrations.—The number of registrations of premises applied for during the year in my district totalled 174. Certificates were issued to all applicants, but in a few instances were withheld for a period pending carrying out of improvements required to bring the premises into compliance with the Act.

Structural Alterations.—I found it necessary to have structural alterations carried out at two factories in respect to walls and flooring.

Sanitation.—Fairly good hygienic conditions prevail in factory workrooms. In towns where the sewerage and septic tank systems are in operation good conditions also exist in respect to closet and lavatory accommodation; but where the pan and earth system prevails careful attention of inspectors is necessary to ensure cleanliness of premises used.

Fencing of Machinery.—Constant supervision was given to having fencing of machinery, &c., maintained in efficient condition. In the majority of factories genuine efforts are made to fully comply with the requirements of the Act, but there are a number of occupiers who apparently fail to realise dangers existing in their plants until an inspector directs attention to same, and notices had to be served on such occupiers to securely fence various dangerous parts of machinery and mill-gearing.

Accidents.—A number of accidents were reported by occupiers but investigation disclosed that the majority were of a minor character; those of a serious nature comprised loss of fingers, caused by employees' hands being caught in planer and mincing machines. In no instance, did investigation of accidents show neglect on part of employers.

Boiler Regulations.—I found the regulations to be generally well observed.

Certificate of Fitness.—Notices were served on a number of occupiers to obtain certificates of fitness for persons under 16 years of age working in their factories.

Bakehouses.—These premises were found to be kept in fairly clean condition. In two instances, I had wooden floors replaced with concrete.

Fire Escapes.—Existing fire escapes were kept in satisfactory condition.

General.—Departmental duties other than factory inspections occupied a considerable portion of my time, and prevented my visiting a number of towns in my district during the year.

Western District.

This district is bounded by a line drawn from a point just west of Perthville, through and including Blayney and just south of Cadia, thence westerly to a point just west of Grawlin Plains, thence west of the railway line to a point just south-west of Garema, thence north-westerly to and including Euabalong, thence westerly and just south of the Broken Hill railway line to Tolarno, thence northerly through Gunyulka to a point just south of Curriwillinghi (Q.), thence southerly and westward of Carinda and south-easterly of Quambone to a point just south of Dubbo, thence south of the railway line to Merrygoen, excluding the towns thereon, thence southerly and just westward of Hill End and Bathurst to the point of commencement.

It is served by the Main Western line with its branches to Cobar and Brewarrina; the railway line through Molong and Parkes to Tolarno, the cross-country line from Parkes to Garema with its branches to Tottenham and Mount Hope.

There are approximately 400 factories within this district which covers an area of approximately 86,870 square miles.

The Department has a branch office at Orange which is the headquarters of this district and at which the inspector in charge of the area is stationed.

Mr. Inspector Baker reports :—

General.—The past year was an exceptionally heavy one, as in addition to the actual routine work of that period, I had also to deal with a long list of matters which had accumulated during my absence on leave in 1926. I also carried out a number of investigations *re* juvenile migrants for the Labour Exchange Branch.

As practically all industries are now governed by awards, a country inspector has to deal with an increasing number of matters and inquiries, many of which would, in the ordinary course of business in the Metropolitan District, be first dealt with in another way.

Work in connection with the administration of the Industrial Arbitration Act occupied the major portion of my time.

During the year I successfully conducted a large number of industrial prosecutions. I also conducted prosecutions in connection with Labour Exchange matters and the Day Baking Act.

Registrations.—The Amendments of the Act, particularly the section imposing a registration fee, was the cause of many alterations to the Factory Register.

A number of businesses changed hands and a few new premises were also registered during the year.

In several of the towns electric power is now available, and I expect within a short time a number of motors will be installed by persons who at present do not use mechanical power of any kind. An increase in the number of registrations can therefore be expected at no distant date.

Sanitation.—With one exception (a very old bakehouse), I found the factories visited in fair to good condition. In a few instances minor repairs were necessary and were carried out on my instructions.

One small factory building was found to be under the minimum height of 8 feet (from floor to ceiling). A permit only was granted pending the carrying out of the necessary alterations.

Bakehouses.—I found a bakehouse at Cobar in a very bad structural condition. The interior of the building, walls, ceilings and floors were very dirty, as were several troughs not then being used.

I then obtained the co-operation of the local Health Officer, and after inspection of the premises prosecution was decided upon.

I instructed the occupier to either demolish the old building and rebuild or to move into suitable premises.

In another town I found the floor of a bakehouse in a very broken state. I interviewed the owner of the premises and he undertook to put down a new floor. This work has since been completed.

Limewashing of bakehouses received attention and where necessary I served written instructions on the occupier to have the work carried out.

Several of the bakehouses visited were without the special ventilator over the furnace door. In all such cases I gave instructions for the ventilator to be affixed.

Fire Escapes.—With the exception of flour mills there are no factories in the district in which persons are employed above the first floor.

Certificates of Fitness.—A few cases came under my notice of lads under 16 years of age being employed in factories where mechanical power was used without first obtaining certificates of fitness.

The occupiers were cautioned and the required certificates were obtained.

Several children who applied for permission to work at the woollen mills (Orange) were found, following the usual departmental inquiry, to be under 14 years of age. They were at once discharged by the management. In each case the child's date of birth had been misrepresented by the parent.

Overtime.—Very little overtime was worked. No breaches of the section came under my notice.

Boiler Regulations.—In all factories where boilers or other pressure vessels were used I applied the regulations. Where any such apparatus was being used without a certificate I drew the occupier's attention to the regulations and also served on them written instructions to comply with the law.

Fencing of Machinery.—As safe guarding against injury to all persons working in a factory where mechanical power is employed is, in my opinion, the most important of a factory inspector's duties, I, as in past years, gave my best attention to the matter of making the dangerous machinery and mill-gearing as safe as possible.

I am pleased to say that with very few exceptions I found the machinery in the factories visited well guarded. The attention of the occupiers was drawn to any defects seen and in such cases written instructions to securely fence and/or guard were also served.

Accidents.—A number of accidents were inquired into during the year, None proved fatal. The most serious resulted in the loss of a forearm by a flour mill employee, and in a woollen mill a female weaver lost an eye.

The accident in the flour mill occurred in mill-gearing. The person injured attempted to place a machine belt on a driving pulley on the main top floor shafting; his arm becoming caught in the intake of the belt and pulley, he was thrown over the shafting and his arm was torn off. No notice had been given by the employee to the engine-driver of his intention to put on the belt and no one was aware of the occurrence until the injury had been received.

In my opinion the practice of putting on belts on driving pulleys, particularly those on shafting while same is in motion, is an exceedingly dangerous one and should be prohibited.

In the accident at the woollen mills the weaver was passing one of the looms when a shuttle struck her eye. The loom from which this shuttle flew was fitted with a shuttle guard, but on account of a breakdown of the machine the shuttle was deflected in its flight and struck this unfortunate girl in the eye.

None of the other accidents inquired into were of a serious nature.

In conclusion I can report that electric light and power stations were erected in the towns of Forbes and Narromine.

The Forbes station was opened at the end of the year and the machinery for the Narromine station was being installed when I visited that town in October last.

The dry press brick-making industry at Parkes prospered during the year and in the original yard six kilns are now being used. The bricks produced are said to be of first-rate quality.

A brick company also started at Orange, but towards the end of the year closed down for the purpose of making substantial alterations.

Central Western District.

This district is bounded by a line drawn south-west from and including Rooty Hill to a point just north of Burragorang, thence westerly to and including Isabella, thence northerly through and including Perthville, Bathurst and Hill End to and including Merrygoen, thence along the railway line to and including Dubbo, thence north westerly to a point about sixteen miles north of Carinda, thence easterly and including Pilliga to a point just south of Bullerawa, thence south-easterly to a point just south of Tambar Springs, thence easterly to a point just south-west of Werris Creek, thence south-westerly to a point just west of Cassilis, thence south-easterly to a point north of Wiseman's Ferry, thence south-westerly to a point north of Kurrajong Heights, thence south-easterly to the point of commencement.

It is served by the Main Western line to Perthville, the railway lines to Coonamble and Gwabegar and Coolah, and the cross country line from Binnaway to Werris Creek.

There are approximately 500 factories registered within this district which covers an area of approximately 18,500 square miles.

The inspector who has charge of this district operates from the Head Office and visits all parts of it regularly.

Mr. Inspector Varley (Central Western) reports:—

From January 30th, 1927, I was given charge of the above area. Later in the year this area was increased to take in from Coonabarabran to the rail head at Gwabegar, and the area lying from there to Pilliga, also the town of Dubbo and its environs. This new area contains some twenty-two fair sized sawmills as well as many other factories.

Registration.—A large number of new registrations were dealt with during the year as well as many transfers due to change of occupancy.

Structural Alterations.—Generally, I found premises in a fairly satisfactory condition, but in a few instances I had alterations carried out to meet the requirements of the Act.

Hygiene.—This matter received full consideration, and I found it necessary to issue instructions to improve the conditions within the factory, and also the lavatory accommodation. During the year, I was given duties within the Metropolitan Area, and I found it necessary, on three occasions to have alterations made to improve W.C. accommodation.

Fencing and Guarding.—My duties in this direction occupied quite the major portion of my time. The interest now being taken by occupiers generally, and especially the larger concerns tends to bring the standard of fencing and guarding to a high state of efficiency. This matter is one for a closer co-operation between employers and employees adopting sound and organised Safety First principles. I am pleased to state that one large factory has found that by adopting the above methods the accidents rate has been greatly reduced. Every effort was made by the company to enlist the support and co-operation of the employees, the result being that to-day this factory is considered to contain one of the best guarded plants in the State.

Accidents.—I am pleased to state that no fatal accidents occurred during the year. A number of minor accidents occurred resulting in slight injuries only. Of the more serious accidents, one which resulted in the loss of an arm was due to the fact that the injured person who was engaged in filling oil cups on a line of shafting, at the time was wearing a very torn coat.

Fire Escapes.—No new fire escapes were erected during the year. In one instance, plans of a fire escape that was already erected were submitted and passed by the Fire Commissioners.

Bakehouses.—The general conditions of these factories were satisfactory but it was found necessary on occasions to issue instructions for limewashing, repairing floors, and the provision of extra ventilation in the form of properly constructed hoods placed over the ovens and furnace doors to carry off gases, &c., to the outer air.

Certificates of Fitness.—A number of employers were warned regarding Section 45.

Boiler Inspection.—This matter received a great deal of attention from me during the year, and as a result I furnished a special report to the Chief Inspector.

General.—From time to time during the year I performed duty in the Metropolitan area, during which time I was called upon to investigate two fatal accidents.

The Western area has during 1927 been subject to severe drought conditions. The prospects for 1928 seem very bright, as heavy rain fell throughout the area during the latter end of the year.

Broken Hill District.

This district is bounded by a line drawn from between Wentworth and Gol Gol north-easterly and crossing the Broken Hill Railway line to a point just east of Gunyulka, thence north westerly and east of Bootra and Connulpie Downs to a point on the Victorian border about twenty-four miles east of Wannah, thence westerly along that border to the South Australian border, thence southerly along that border to the Victorian border and easterly along that border to the point of commencement.

This district contains approximately 150 factories and covers an area of approximately 44,750 square miles.

The Department has a branch office at Broken Hill where the inspector in charge of the district is stationed.

Mr. Inspector Bennet (Broken Hill) reports:—

This district, to which I was transferred in January, 1927, includes Wentworth, Wilcannia, and Menindie. The number of factories is limited, but heavy demands are made upon the inspector apart from factory inspections, in work under the Industrial Arbitration Act, Early Closing Act, Gas Act, Workers' Compensation Act, and Rural Workers' Accommodation Act. There are also duties connected with the Labour Exchange State Government Insurance Office, and the Electrical Contractors and Electricians Licensing Act.

In all matters apart from the Factories and Shops Act, independent reports have already been furnished to the Department.

I was able to make eighty-five inspections under the Factories Act during the year with satisfactory results.

Fencing and Guarding of Machinery.—The conversion of the Broken Hill Municipal Electric Light Plant from steam to crude oil propulsion which was commenced in 1926 was completed this year and guards and fences of modern standard were provided. In this matter I had the cordial co-operation of the Management.

At a large timber mill, in Broken Hill, the first section of a blower exhaust system was installed, an eight-inch fan being provided to carry off the dust from the big saw. This having proved satisfactory the system is to be extended.

In a large engineering works in Broken Hill, employing about 200 hands, I gave instructions which resulted in the provision of many new safety devices in addition to the alteration and repair of some of the existing safeguards. The Management gave me all possible assistance.

Bakehouses.—Careful attention was given to the local bakehouses and smallgoods factories and instructions were promptly carried out.

Certificates of Fitness.—Three certificates of fitness were issued during the year to boys under 16 years of age.

Appendix I.

Persons employed, by Class of Factory, Classified by Industry—1927.

THE STATE.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
CLASS 1.—TREATING RAW MATERIAL, THE PRODUCT OF PASTORAL PURSUITS.												
(a) Animal Products.												
Boiling-down and tallow-refining	10	2	...	5	...	7	...	117	...	131	...	131
Glue	1	...	3	3	26	4	20	97	19	104	68	172
Canning	63	27	2	45	5	66	1	885	2	1,023	10	1,033
Wool-scouring and fellmongering	34	7	...	32	3	109	6	704	32	852	41	893
Other animal products	9	75	...	44	...	35	...	233	...	387	...	387
Total	117	111	5	129	34	221	27	2,036	53	2,497	119	2,616
(b) Vegetable Products.												
Chaff-cutting	97	1	...	4	...	18	...	343	...	336	...	366
Total, Class 1	214	112	5	133	34	239	27	2,379	53	2,863	119	2,982
CLASS 2.—OILS AND FATS—ANIMAL AND VEGETABLE.												
Oil and grease	9	7	...	14	...	14	...	173	...	208	...	208
Soap, candles, &c.	24	30	25	36	42	55	74	370	72	491	213	704
Total, Class 2	33	37	25	50	42	69	74	543	72	699	213	912
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.												
Asphalt	16	8	...	9	...	15	...	119	...	151	...	151
Bricks and tiles	137	152	...	231	...	294	1	2,766	44	3,443	45	3,488
Glass and glass bottles	7	58	4	89	9	111	4	921	2	1,179	19	1,198
Glass (ornamental)	35	19	1	58	2	81	1	319	1	477	5	482
Lime, plaster, and cement	22	6	1	23	1	34	2	983	3	1,046	7	1,053
Marble and slate	12	...	...	9	...	8	...	167	...	184	...	184
Modelling and fibrous plaster	38	4	...	33	...	25	...	237	...	299	...	299
Monumental masonry	34	2	...	15	...	16	...	212	...	245	...	245
Pottery and earthenware	16	56	...	54	1	60	...	509	3	679	4	683
Stone-dressing	46	...	...	9	...	12	...	434	...	455	...	455
Other works	20	3	...	15	...	24	...	240	...	282	...	282
Total, Class 3	383	308	6	545	13	680	8	6,907	53	8,440	80	8,520
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	1	...	...	1	...	1	...	1	...	3	...	3
Boxes and packing-cases	63	20	4	35	4	61	3	701	4	817	15	832
Cooperage	9	4	...	13	...	12	...	225	...	254	...	254
Joinery	348	66	1	316	...	461	...	2,671	2	3,514	3	3,517
Saw-milling—Timber	474	28	...	210	...	317	...	3,141	2	3,696	2	3,698
Firewood	140	3	...	5	...	9	...	223	...	240	...	240
Wood-turning	20	1	3	15	1	8	1	52	5	76	10	86
Other works	39	7	4	22	5	56	7	326	4	411	20	431
Total, Class 4	1,094	129	12	617	10	925	11	7,340	17	9,011	50	9,061
CLASS 5.—METAL WORKS, MACHINERY, &c.												
Agricultural implements	12	7	...	18	...	35	1	216	...	276	1	277
Brass and copper...	78	42	5	110	9	143	6	647	8	942	28	970
Cutlery	26	5	2	14	5	21	...	117	...	157	7	164
Engineering	343	255	5	762	5	1,003	8	7,108	23	9,128	41	9,169
Galvanised iron	63	54	...	124	1	148	1	751	3	1,677	5	1,032
Iron works, foundries, and boilermaking ...	188	117	...	357	2	521	18	7,733	17	8,728	57	8,765
Iron safes and doors	5	9	...	12	...	20	...	149	...	190	...	190
Lead-mills...	2	1	...	5	...	7	...	33	...	46	...	46
Railway carriage works	2	10	...	35	1	37	...	410	2	492	3	495
Smelting and ore dressing	5	3	...	9	...	30	...	532	...	574	...	574
Stoves and ovens...	15	27	...	55	...	81	...	585	...	748	...	748
Tinsmithing	23	107	36	207	61	180	106	554	110	1,048	313	1,361
Wire-working	26	50	...	251	6	346	4	1,954	12	2,601	22	2,623
Other metal works	83	105	8	168	22	182	23	839	19	1,324	72	1,396
Plumbing	25	9	...	29	...	28	...	291	...	357	...	357
Farriery	14	3	...	7	...	3	...	33	...	46	...	46
Total, Class 5	910	804	56	2,163	112	2,785	167	21,982	194	27,734	529	28,263
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(a) Animal Food.												
Bacon	19	1	...	8	...	12	...	216	...	237	...	237
Butchers' smallgoods	1,116	24	1	69	...	112	4	1,716	12	1,921	17	1,938
Margarine	2	1	...	5	...	37	...	105	...	148	...	148
Meat-preserving	7	1	2	6	4	9	11	191	43	207	60	267
Total	1,144	27	3	88	4	170	15	2,228	55	2,513	77	2,590

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total
CLASS 6.—CONNECTED WITH FOOD AND DRINK AND THE PREPARATION THEREOF—*continued.*												
(*b*) *Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.*												
Biscuits	8	205	219	144	230	90	231	330	310	769	990	1,759
Bread and pastry	1,418	72	8	437	31	451	23	3,033	185	3,999	247	4,246
Confectionery	180	95	343	131	415	184	513	808	433	1,218	1,704	2,922
Corn-flour and oatmeal	18	24	47	48	88	63	102	327	106	462	343	805
Flour-milling	58	6	...	29	...	69	4	702	14	806	18	824
Jam and fruit preserving	33	6	9	16	34	59	29	308	201	389	273	662
Pickles, sauces, and vinegar	6	1	7	4	7	21	12	55	56	81	82	163
Poultry foods and dog biscuits	12	6	...	8	...	8	...	135	...	157	...	157
Self-raising flour	4	...	3	3	9	7	15	17	12	27	39	66
Sugar-refining	4	5	...	4	2	20	7	679	...	708	9	717
Total	1,741	420	636	824	816	978	936	6,394	1,317	8,616	3,705	12,321
(*c*) *Drinks and Stimulants.*												
Aerated waters and cordials	176	19	...	130	24	137	10	495	35	781	69	850
Brewing	16	1	4	9	7	34	15	926	39	970	56	1,026
Condiments, coffee, spices, &c.	42	29	67	29	161	37	142	225	239	320	609	929
Distillery	3	...	...	1	...	1	1	62	9	64	10	74
Ice and refrigerating	222	17	...	60	2	76	2	961	...	1,114	4	1,118
Tea blending and packing	12	19	6	17	19	16	64	95	73	147	162	309
Wine, spirits, and beer bottling	50	5	2	20	2	43	9	389	50	457	63	520
Total	521	90	79	266	215	344	243	3,153	436	3,853	973	4,826
(*d*) *Narcotics.*												
Tobacco, cigars, and cigarettes	9	25	142	53	254	97	337	676	634	851	1,367	2,218
Total, Class 6	3,415	562	860	1,231	1,289	1,589	1,531	12,451	2,442	15,833	6,122	21,955
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(*a*) *Textile.*												
Woollen mills	31	170	241	136	328	98	485	749	995	1,153	2,049	3,202
(*b*) *Dress.*												
Boots and shoes :—Order made	654	40	14	69	21	83	12	917	33	1,109	80	1,189
Factory made	96	171	334	216	374	191	344	1,978	1,116	2,556	2,168	4,724
Clothing :—Men's slops	57	22	370	49	460	87	549	519	1,533	677	2,912	3,589
Women's slops	146	19	328	21	485	16	533	154	1,479	210	2,825	3,035
Tailoring	348	42	262	49	420	88	599	958	1,775	1,137	3,053	4,193
Corsets	9	1	71	8	156	6	204	23	244	38	675	713
Dressmaking and millinery :—												
Makers' material	248	29	480	35	680	29	754	123	1,471	221	3,385	3,606
Customers' material	129	1	92	3	110	1	118	9	297	14	617	631
Dye works	30	15	8	22	40	19	53	147	87	203	188	391
Furriery	32	24	27	34	64	35	73	94	105	187	269	456
Hats and caps	29	29	85	62	146	81	154	305	320	477	705	1,182
Hosiery and knitting	68	38	203	74	536	109	731	372	1,022	593	2,592	3,185
Oilskin and waterproof clothing	7	1	14	1	21	4	19	21	58	27	112	139
Shirts, ties, and scarves	49	22	365	31	377	22	362	95	804	170	1,908	2,078
Umbrellas	6	7	17	8	20	6	14	24	23	45	74	119
Underclothing	103	18	215	22	340	20	324	72	511	132	1,390	1,522
Wigs and hair work	5	...	1	...	2	...	10	3	8	3	21	24
Total	2,016	479	2,986	704	4,252	797	4,853	5,819	10,886	7,799	22,977	30,776
(*c*) *Fibrous Materials and Textiles not elsewhere included.*												
Bags and sacks	12	19	49	18	63	17	87	112	107	166	306	472
Rope and twine	6	26	10	46	27	23	11	96	8	191	56	247
Tents and tarpaulins	12	5	9	9	13	5	25	52	98	71	145	216
Total	30	50	68	73	103	45	123	260	213	428	507	935
Total, Class 7	2,077	699	3,295	913	4,683	940	5,461	6,828	12,094	9,380	25,533	34,913
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	22	10	...	46	3	38	5	141	19	235	27	262
Electrotyping and stereotyping, type founding, and printers' materials	14	6	...	12	4	15	5	84	7	117	16	133
Paper bags and boxes	20	53	165	60	193	66	173	205	289	384	820	1,204
Paper mills, cardboard, and strawboard	8	9	12	21	26	37	59	357	101	424	189	613
Photo.-engraving, photo.-lithography, and photo. materials	50	8	27	30	70	28	95	117	237	183	429	612
Printing, bookbinding, and manufacturing stationery	531	330	310	671	468	797	533	4,638	888	6,436	2,199	8,635
Total, Class 8	645	416	514	840	764	981	861	5,542	1,541	7,779	3,680	11,459
CLASS 9.—MUSICAL INSTRUMENTS, &C.												
Pianos, organs, and sewing-machines	25	17	7	56	5	93	18	489	41	655	71	726

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	3	1	3	1	1	3	2	5	2	10	8	18
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY, HARNESS, &c.												
Coaches and waggons	138	8	...	70	...	84	...	446	...	608	...	608
Cycles and motor cars	888	278	4	826	25	1,004	9	3,903	31	6,011	69	6,080
Perambulators, &c.	7	9	...	20	1	15	2	89	1	133	4	137
Saddlery, harness, &c.	35	3	1	9	2	15	6	151	20	178	29	207
Naves, spokes, &c.	2	...	...	...	...	...	2	2	3	2	5	7
Whips	2	...	...	1	...	...	...	8	...	9	...	9
Total, Class 11	1,072	298	5	926	28	1,118	19	4,599	55	6,941	107	7,048
CLASS 12.—SHIPBUILDING, FITTINGS, &c.												
Docks and slips	3	1	...	16	...	35	...	201	...	253	...	253
Sailmaking	9	1	1	3	...	2	...	20	2	26	3	29
Ship and boat building	27	4	...	37	...	39	...	641	2	721	2	723
Total, Class 12	39	6	1	56	...	76	...	862	4	1,000	5	1,005
CLASS 13.—FURNITURE, BEDDING, &c.												
Bedding, flock, and upholstery	89	63	52	130	86	155	106	704	263	1,052	507	1,559
Carpet-sewing	4	1	1	4	6	6	8	35	47	46	62	108
Iron bedsteads	6	18	...	28	...	17	...	188	...	251	...	251
Billiard tables	1	...	...	5	...	6	...	60	3	71	3	74
Chair-making	18	8	...	18	...	42	...	192	1	260	1	261
Furniture and cabinet making—												
European	262	85	6	284	5	519	7	2,199	16	3,087	34	3,121
Chinese	16	...	...	...	...	...	...	131	...	131	...	131
Bamboo and wicker	15	4	...	9	1	22	...	108	1	143	2	145
Picture frames	26	8	4	18	8	15	16	82	37	123	65	188
Window blinds	12	7	4	7	8	6	11	41	33	61	56	117
Total, Class 13	449	194	67	503	114	788	148	3,740	401	5,225	730	5,955
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c.	18	10	24	16	59	17	97	100	102	143	282	425
Chemical works and drugs	68	48	82	84	134	62	128	470	232	664	576	1,240
Fertilisers	4	...	...	2	...	3	...	65	...	70	...	70
Perfumes and essences	11	7	29	6	22	14	39	28	35	55	125	180
Paints and varnishes	21	52	9	57	4	61	24	397	23	567	60	627
Other Minor Works	8	1	1	5	...	7	...	88	...	101	1	102
Total, Class 14	130	118	145	170	219	164	288	1,148	392	1,600	1,044	2,644
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	32	5	...	27	4	31	1	107	6	170	11	181
Surgical instruments	4	1	...	2	1	2	1	17	3	22	5	27
Other Minor Works	4	1	...	2	...	...	1	5	1	8	2	10
Total, Class 15	40	7	...	31	5	33	3	129	10	200	18	218
CLASS 16.—TIMEPIECES, JEWELLERY, AND PLATEDWARE.												
Electroplating	36	11	...	44	...	41	1	168	6	264	7	271
Jewellery	75	29	12	42	21	59	32	389	51	519	116	635
Total, Class 16	111	40	12	86	21	100	33	557	57	783	123	906
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	114	97	11	433	41	459	72	1,503	86	2,492	210	2,702
Electric light and power works*	256	4	...	47	...	43	...	1,040	2	1,134	2	1,136
Gas works	41	14	...	12	...	33	...	1,300	...	1,359	...	1,359
Lamps and gas mantles	6	2	...	5	25	9	37	23	36	39	98	137
Hydraulic power	2	1	...	1	...	...	...	25	...	27	...	27
Coke works	11	14	...	8	...	14	...	388	...	424	...	424
Total, Class 17	430	132	11	506	66	558	109	4,279	124	5,475	310	5,785
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy Leather	13	9	35	16	47	14	56	72	60	111	198	309
Leather belting	5	3	...	7	...	5	...	43	...	58	...	58
Portmanteaux	10	30	16	37	25	43	30	155	25	265	96	361
Other Minor Works	22	26	27	13	48	21	72	116	67	176	214	390
Total, Class 18	50	68	78	73	120	83	158	386	152	610	508	1,118
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting	3	...	...	...	...	...	...	14	...	14	...	14
Brooms, brushes	31	34	17	25	21	31	20	167	25	257	83	340
Florists and seedsmen	7	1	11	2	11	1	6	17	13	21	41	62
Laundries—European†	152	10	91	37	221	42	309	271	995	360	1,616	1,976
Chinese	22	...	...	...	...	...	1	27	1	27	2	29
Rubber goods	12	50	31	75	67	110	136	827	436	1,062	670	1,732
Toys	12	9	1	12	4	18	8	33	5	72	18	90
Painting and sign-writing	15	5	1	9	2	26	1	448	6	488	10	498
Other Minor Works	39	35	21	43	59	58	75	343	95	479	250	729
Total, Class 19	293	144	173	203	385	286	556	2,147	1,576	2,780	2,690	5,470
Total, All Industries	11,413	4,092	5,275	9,103	7,911	11,510	9,474	82,313	19,230	107,018	41,940	148,958

Appendix II.

Factories, by Number of Persons employed—1923-1927.

Year	Number of Factories in which the number of persons employed is—															Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																
1923	3,147	1,647	763	347	171	198	90	44	66	37	25	14	3	8	5	3	6,573
1924	3,246	1,756	822	349	187	197	96	48	61	43	29	11	6	9	4	4	6,868
1925	3,310	1,738	828	353	187	198	106	59	73	32	29	8	8	8	5	5	6,947
1926	2,970	1,841	851	383	217	219	123	58	82	31	32	9	7	7	4	3	6,837
1927	3,043	1,790	843	375	235	236	118	72	64	39	27	16	3	11	2	3	6,877
Newcastle District.																
1923	836	185	83	32	9	7	4	3	5	3	2	...	...	...	1	1	1,171
1924	758	300	77	39	6	14	2	3	3	4	1	1	1	...	1	1	1,211
1925	784	295	95	29	15	10	4	3	3	1	1	2	...	1	1	1	1,245
1926	755	298	100	23	18	7	7	1	2	2	...	1	2	...	...	1	1,217
1927	723	280	81	28	12	8	2	2	5	2	1	...	1	...	1	1	1,147
Rest of State.																
1923	2,587	475	183	34	14	4	3	2	6	1	2	...	...	2	1	...	3,314
1924	2,415	816	184	30	9	10	4	1	4	2	1	1	...	3	...	...	3,480
1925	2,616	786	177	33	9	6	4	2	3	2	2	1	...	2	1	...	3,644
1926	2,618	882	207	34	10	6	5	3	3	2	3	1	...	...	1	...	3,775
1927	2,317	842	170	28	10	5	2	2	4	3	3	...	2	1	...	...	3,389
State.																
1923	6,570	2,307	1,034	413	194	209	97	49	77	41	29	14	3	10	7	4	11,058
1924	6,419	2,872	1,083	418	202	221	102	52	68	49	31	13	7	13	4	5	11,559
1925	6,710	2,819	1,100	415	211	214	114	64	79	35	32	11	8	11	7	6	11,836
1926	6,343	3,021	1,158	440	245	232	135	62	87	35	35	11	9	7	5	4	11,829
1927	6,083	2,912	1,094	431	257	249	122	76	73	44	31	16	6	12	3	4	11,413

Appendix III.

Factories, by Class and Number of Persons employed, 1927.

Class of Factory.	Number of Factories in which the number of persons employed is—															Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																
I. Treating raw material, product of pastoral pursuits	34	25	22	8	2	8	3	4	...	1	2	...	...	...	...	...	109
II. Oils and fats—animal, vegetable, &c.	2	5	2	6	2	2	1	1	...	1	...	...	...	...	...	...	22
III. Processes relating to stone, clay, glass, &c. ...	39	66	31	36	19	21	5	5	3	...	3	1	...	1	...	...	230
IV. Working in wood	208	128	56	13	3	18	4	3	3	...	1	...	...	...	...	...	437
V. Metal works, machinery, &c.	258	184	109	45	39	33	16	13	7	8	5	3	1	2	...	...	723
VI. Connected with food and drink, &c.	1,095	272	94	42	20	23	15	3	10	3	1	4	1	3	1	1	1,588
VII. Clothing and textile fabrics, &c.	703	438	210	102	78	65	36	21	21	13	7	4	...	4	...	1	1,703
VIII. Books, paper, printing, engraving, &c.	111	135	84	40	17	16	10	8	8	5	3	2	1	...	...	...	440
IX. Musical instruments, &c.	6	6	5	3	1	1	1	...	...	...	...	1	...	...	...	...	24
X. Arms and explosives	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XI. Vehicles and fittings, saddlery, harness, &c. ...	204	154	40	18	11	16	6	2	3	...	...	1	...	...	...	...	455
XII. Ship and boat building, &c.	11	7	4	2	1	2	...	...	1	...	2	...	...	...	...	...	30
XIII. Furniture, bedding, &c.	117	123	71	21	19	9	7	3	4	2	...	...	...	...	...	...	376
XIV. Drugs, chemicals, and by-products	23	50	22	7	2	5	7	2	1	2	1	...	...	...	...	...	122
XV. Surgical and other scientific instruments	18	12	6	1	...	...	...	...	...	...	...	...	...	...	...	...	37
XVI. Jewellery and plated-ware, &c.	59	29	10	5	2	...	1	...	...	...	...	...	...	...	...	...	106
XVII. Heat, light and power	79	46	15	8	5	6	3	4	1	2	1	...	...	1	1	...	172
XVIII. Leatherware (excepting saddlery and harness) ...	8	16	10	5	6	1	...	3	...	...	1	...	...	...	...	...	50
XIX. Minor wares not elsewhere included	68	91	52	13	8	10	3	...	2	2	...	...	...	...	...	1	250
Total	3,043	1,790	843	375	235	236	118	72	64	39	27	16	3	11	2	3	6,877
Newcastle District.																
I. Treating raw material, product of pastoral pursuits	15	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	16
II. Oils and fats—animal, vegetable, &c.	1	2	...	...	...	...	...	...	1	...	...	...	...	...	...	...	4
III. Processes relating to stone, clay, glass, &c. ...	17	19	11	3	3	...	...	...	...	...	...	...	...	...	...	...	53
IV. Working in wood	85	51	20	3	1	1	...	...	...	...	...	...	...	...	...	...	161
V. Metal work, machinery, &c.	26	19	6	5	3	...	...	2	2	1	1	...	1	...	1	1	68
VI. Connected with food and drink, &c.	355	53	18	5	1	1	1	...	1	...	...	...	...	...	...	...	435
VII. Clothing and textile fabrics, &c.	69	39	15	4	2	2	...	...	1	...	...	...	...	...	...	...	132
VIII. Books, paper, printing, engraving, &c.	12	23	1	2	2	2	...	...	...	...	...	...	...	...	...	...	42
IX. Musical instruments, &c.	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XI. Vehicles and fittings, saddlery, harness, &c. ...	71	43	3	1	...	...	...	...	...	...	...	...	...	...	...	...	118
XII. Ship and boat building, &c.	7	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
XIII. Furniture, bedding, &c.	13	13	4	1	...	...	1	...	...	...	...	...	...	...	...	...	32
XIV. Drugs, chemicals, and by-products	3	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XV. Surgical and other scientific instruments	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
XVI. Jewellery and plated-ware, &c.	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XVII. Heat, light and power	42	8	...	3	...	2	...	...	...	...	...	...	...	...	...	...	55
XIX. Minor wares, n.e.i.	4	4	2	1	...	...	...	...	...	...	...	...	...	...	...	...	11
Total	723	280	81	28	12	8	2	2	5	2	1	...	1	...	1	1	1,147

Appendix III—*continued.*

Class of Factory.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750	750 and under 1,000.	1,000 and over.	
Rest of State.																	
I. Treating raw material, product of pastoral pursuits	39	43	7	...	...	...	...	...	...	...	...	...	...	...	...	...	89
II. Oils and fats—animal, vegetable, &c.	5	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7
III. Processes relating to stone, clay, glass, &c. ...	27	48	16	3	1	2	1	...	...	1	...	...	1	...	...	...	100
IV. Working in wood	267	167	51	9	1	1	...	...	...	...	...	...	...	...	...	...	496
V. Metal work, machinery, &c.	71	35	5	2	1	...	1	...	...	...	2	...	1	1	...	...	119
VI. Connected with food and drink, &c.	1,197	153	34	4	...	...	...	...	3	1	...	...	...	...	...	...	1,392
VII. Clothing and textile fabrics, &c.	125	97	13	...	1	1	...	2	1	1	1	...	...	...	...	...	242
VIII. Books, paper, printing, engraving, &c.	85	59	13	4	1	1	...	...	...	...	...	...	...	...	...	...	163
XI. Vehicles and fittings, saddlery, harness, &c. ...	305	180	13	1	...	...	...	...	...	...	...	...	...	...	...	...	499
XII. Ship and boat building, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XIII. Furniture, bedding, &c.	31	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	41
XIV. Drugs, chemicals, and by-products	...	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	3
XV. Surgical and other scientific instruments	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XVI. Jewellery and plated-ware, &c.	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
XVII. Heat, light and power	146	39	11	4	3	...	...	...	...	...	...	...	...	...	...	...	203
XIX. Minor wares, n.e.i.	16	8	6	1	1	...	...	...	...	...	...	...	...	...	...	...	32
Total	2,317	842	170	28	10	5	2	2	4	3	3	...	2	1	...	...	3,389
State.																	
I. Treating raw materials, product of pastoral pursuits	88	68	29	8	2	8	3	4	...	2	2	...	...	...	...	...	214
II. Oils and fats—animal, vegetable, &c.	8	9	2	6	2	2	1	1	1	1	...	...	...	...	...	...	33
III. Processes in stone, clay, glass, &c.	83	133	58	42	23	23	6	5	3	1	3	1	1	1	...	...	383
IV. Working in wood	560	346	127	25	5	20	4	3	3	...	1	...	...	...	...	...	1,094
V. Metal works, machinery, &c.	355	238	120	52	43	33	17	15	9	9	8	3	3	3	1	1	910
VI. Connected with food and drink, &c.	2,647	478	146	51	21	24	16	3	14	4	1	4	1	3	1	1	3,415
VII. Clothing and textile fabrics, &c.	897	574	238	106	81	68	36	23	23	14	8	4	...	4	...	1	2,077
VIII. Books, paper, printing, and engraving, &c. ...	208	217	98	46	20	19	10	8	8	5	3	2	1	...	...	...	645
IX. Musical instruments, &c.	6	6	6	3	1	1	1	...	...	...	...	1	...	...	...	...	25
X. Arms and explosives	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XI. Vehicles and fittings, saddlery and harness, &c. ...	580	377	56	20	11	16	6	2	3	...	...	1	...	...	...	...	1,072
XII. Ship and boat building, &c.	18	9	4	2	1	2	...	...	1	...	2	...	...	...	...	...	39
XIII. Furniture, bedding, &c.	161	146	75	22	19	9	8	3	4	2	...	...	...	...	...	...	449
XIV. Drugs, chemicals, and by-products	26	53	23	7	3	5	7	2	1	2	1	...	...	...	...	...	130
XV. Surgical and other scientific instruments	21	12	6	1	...	...	...	...	...	...	...	...	...	...	...	...	40
XVI. Jewellery and plated-ware, &c.	62	31	10	5	2	...	1	...	...	...	...	...	...	...	...	...	111
XVII. Heat, light, and power	267	93	26	15	8	8	3	4	1	2	1	...	...	1	1	...	430
XVIII. Leatherware, n.e.i.	8	16	10	5	6	1	...	3	...	...	1	...	...	...	...	...	50
XIX. Minor wares, n.e.i.	88	103	60	15	9	10	3	...	2	2	...	...	...	...	...	1	293
Total	6,083	2,912	1,094	431	257	249	122	76	73	44	31	16	6	12	3	4	11,413

Appendix IV.

Persons employed, by Class of Factory, Classified by Industry—1927.

Metropolitan District.

Class of Factory.	Number of Factories on Register.	Persons employed.									
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Class 1.—Treating Raw Material, the Product of Pastoral Pursuits.												
(a) *Animal Products.*												
Boiling-down and tallow-refining	8	2	...	3	...	5	...	97	...	107	...	107
Glue	1	...	3	3	26	4	20	97	19	104	68	172
Tanning	57	27	2	45	5	63	1	860	2	995	10	1,005
Wool-scouring and fellmongering	20	7	...	30	3	47	6	683	32	767	41	808
Other animal products	4	37	...	17	...	17	...	117	...	188	...	188
Total	90	73	5	98	34	136	27	1,854	53	2,161	119	2,280
(b) *Vegetable Products.*												
Chaff-cutting	19	...	...	...	...	...	...	54	...	54	...	54
Total, Class 1	109	73	5	98	34	136	27	1,908	53	2,215	119	2,334
Class 2.—Oils and Fats—Animal and Vegetable.												
Oil and grease	8	7	...	14	...	14	...	170	...	205	...	205
Soap, candles, &c.	14	22	21	31	29	45	60	277	60	375	170	545
Total, Class 2	22	29	21	45	29	59	60	447	60	580	170	750

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.												
Asphalt	11	7	...	7	...	12	...	94	...	120	...	120
Bricks and tiles	66	140	...	183	...	239	1	2,135	44	2,697	45	2,742
Glass and glass bottles	7	58	4	89	9	111	4	921	2	1,179	19	1,198
Glass (ornamental)	32	17	1	51	2	76	1	302	1	446	5	451
Lime, plaster, and cement	9	3	1	11	1	25	2	280	3	319	7	326
Marble and slate	11	...	...	9	...	8	...	161	...	178	...	178
Modelling and fibrous plaster	25	4	...	24	...	20	...	189	...	237	...	237
Monumental masonry	21	1	...	8	...	10	...	163	...	182	...	182
Pottery and earthenware	13	56	...	53	1	58	...	473	3	640	4	644
Stone-dressing	16	...	...	4	...	6	...	185	...	195	...	195
Other works	19	1	...	11	...	22	...	190	...	224	...	224
Total, Class 3	230	287	6	450	13	587	8	5,093	53	6,417	80	6,497
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	1	...	...	1	...	1	...	1	...	3	...	3
Boxes and packing-cases	52	19	4	32	4	57	3	662	4	770	15	785
Cooperage	8	4	...	11	...	9	...	211	...	235	...	235
Joinery	220	50	1	228	...	324	...	2,082	2	2,684	3	2,687
Saw-milling—Timber	67	12	...	104	...	152	...	928	2	1,196	2	1,198
Firewood	35	1	..	1	...	2	...	75	...	79	...	79
Wood-turning	20	1	3	15	1	8	1	52	5	76	10	86
Other works	34	7	4	19	5	52	7	274	4	352	20	372
Total, Class 4	437	94	12	411	10	605	11	4,285	17	5,395	50	5,445
CLASS 5.—METAL WORKS, MACHINERY, &c.												
Agricultural implements	8	7	...	18	...	33	1	202	...	260	1	261
Brass and copper	76	42	5	105	9	142	6	626	8	915	28	943
Cutlery	26	5	2	14	5	21	...	113	...	153	7	160
Engineering	269	223	5	646	5	810	8	5,647	23	7,326	41	7,367
Galvanised iron	55	49	...	108	1	137	1	706	3	1,000	5	1,005
Iron works, foundries, and boilermaking	127	81	...	224	2	351	18	3,669	17	4,325	37	4,362
Iron safes and doors	5	9	...	12	...	20	...	149	...	190	...	190
Lead-mills	2	1	...	5	...	7	...	33	...	46	...	46
Railway carriage works	2	10	...	35	1	37	...	410	2	492	3	495
Smelting and ore dressing	2	1	...	1	...	18	...	130	...	150	...	150
Stoves and ovens	12	24	...	51	...	76	...	558	...	709	...	709
Tinsmithing	18	103	36	203	61	176	106	531	108	1,013	311	1,324
Wire-working	22	29	...	77	...	135	...	707	...	948	...	948
Other metal works	78	96	8	151	22	167	23	846	19	1,260	72	1,332
Plumbing	10	...	...	15	...	16	...	207	...	238	...	238
Farriery	11	...	...	3	...	3	...	24	...	30	...	30
Total, Class 5	723	680	56	1,668	106	2,149	163	14,558	180	19,055	505	19,560
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF. (a) *Animal Food.*												
Bacon	8	...	...	5	...	7	...	142	...	154	...	154
Butchers' smallgoods	585	15	1	49	...	71	3	1,036	12	1,171	16	1,187
Margarine	2	1	...	5	...	37	...	105	...	148	...	148
Meat-preserving	6	1	2	6	4	9	11	187	43	203	60	263
Total	601	17	3	65	4	124	14	1,470	55	1,676	76	1,752
(b) *Vegetable Foods, including Products not Food but usually connected with the manufacture of Foods.*												
Biscuits	7	202	219	136	229	89	228	323	308	750	984	1,734
Bread and pastry	546	37	7	263	25	263	21	1,699	144	2,262	197	2,459
Confectionery	133	91	332	121	407	175	501	740	425	1,127	1,665	2,792
Corn-flour and oatmeal	14	10	37	20	61	19	77	157	66	206	241	447
Flour-milling	18	3	...	11	...	33	4	395	14	442	18	460
Jam and fruit preserving	25	5	9	14	29	54	29	273	196	346	263	609
Pickles, sauces, and vinegar	5	1	7	4	7	21	12	51	56	77	82	159
Poultry foods and dog biscuits	12	6	...	8	...	8	...	135	...	157	...	157
Self-raising flour	4	...	3	3	9	7	15	17	12	27	39	66
Sugar-refining	1	...	...	1	2	12	7	350	...	363	9	372
Total	765	355	614	581	769	681	894	4,140	1,221	5,757	3,498	9,255
(c) *Drinks and Stimulants.*												
Aerated waters and cordials	31	6	...	47	22	78	9	230	30	361	61	422
Brewing	10	1	4	5	7	24	15	815	30	845	56	901
Condiments, coffee, spices, &c.	37	27	52	28	146	36	132	213	234	304	564	868
Distillery	3	...	...	1	...	1	1	62	9	64	10	74
Ice and refrigerating	96	7	...	28	...	40	...	463	...	538	...	538
Tea blending and packing	12	19	6	17	19	16	64	95	73	147	162	309
Wine, spirits, and beer bottling	24	...	...	13	...	37	9	314	48	364	57	421
Total	213	60	62	139	194	232	230	2,192	424	2,623	910	3,533
(d) *Narcotics.*												
Tobacco, cigars, and cigarettes	9	25	142	53	254	97	337	676	634	851	1,367	2,218
Total, Class 6	1,588	457	821	838	1,221	1,134	1,475	8,478	2,334	10,907	5,851	16,758

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males	Females.	Males.	Females.	Total.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(a) *Textile.*												
Woollen mills	27	118	179	107	236	75	382	643	877	943	1,674	2,617
(b) *Dress.*												
Boots and shoes—Order made	514	29	14	43	21	56	12	722	32	850	79	929
Factory made	94	169	333	213	369	182	333	1,934	1,103	2,498	2,138	4,636
Clothing—Men's slops	54	22	341	46	416	86	509	507	1,484	661	2,750	3,411
Women's slops	144	19	303	21	459	16	519	154	1,457	210	2,738	2,948
Tailoring	187	35	215	36	309	65	423	640	1,418	776	2,365	3,141
Corsets	8	1	71	8	156	6	204	23	240	38	671	709
Dressmaking and millinery—												
Makers' material	232	28	454	35	655	29	725	125	1,424	217	3,258	3,475
Customers' material	106	1	77	1	97	1	95	6	251	9	520	529
Dye works	25	15	6	20	31	18	39	139	85	192	161	353
Furriery	32	24	27	34	64	35	73	94	105	187	269	456
Hats and caps	29	29	85	62	146	81	154	105	320	477	705	1,182
Hosiery and knitting	66	38	302	74	534	109	727	369	1,020	590	2,583	3,173
Oilskin and waterproof clothing	7	1	14	1	21	4	19	21	58	27	112	139
Shirts, ties, and scarves	46	22	361	31	365	21	351	92	786	166	1,863	2,029
Umbrellas	5	7	16	8	20	6	13	24	23	45	72	117
Underclothing	97	17	201	19	319	17	307	64	497	117	1,324	1,441
Wigs and hair work	4	...	1	...	2	...	6	3	4	3	13	16
Total	1,650	457	2,821	652	3,984	732	4,509	5,222	10,307	7,063	21,621	28,684
(c) *Fibrous Materials and Textiles not elsewhere included.*												
Bags and sacks	9	16	49	18	63	17	86	102	106	153	304	457
Rope and twine	6	26	10	46	27	23	11	96	8	191	56	247
Tents and tarpaulins	11	5	9	8	13	4	23	50	98	67	143	210
Total	26	47	68	72	103	44	120	248	212	411	503	914
Total, Class 7 ...	1,703	622	3,068	831	4,323	851	5,011	6,113	11,396	8,417	23,798	32,215
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	21	9	...	46	3	37	5	140	19	232	27	259
Electrotyping and stereotyping, type founding, and printers' materials	14	6	...	12	4	15	5	84	7	117	16	133
Paper bags and boxes	17	53	162	58	192	63	172	183	281	357	807	1,164
Paper mills, cardboard, and strawboard ...	8	9	12	21	26	37	50	357	101	424	189	613
Photo-engraving, photo-lithography, and photo. materials	46	8	25	30	66	28	91	114	228	180	410	590
Printing, bookbinding, and manufacturing stationery	334	281	305	527	448	656	505	3,876	852	5,340	2,110	7,450
Total, Class 8	440	366	504	694	739	836	828	4,754	1,488	6,650	3,559	10,209
CLASS 9.—MUSICAL INSTRUMENTS, &c.												
Pianos, organs, and sewing machines ...	24	17	7	55	5	91	18	479	41	642	71	713
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	3	1	3	1	1	3	2	5	2	10	8	18
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY, HARNESS, &c.												
Coaches and waggons	38	5	...	25	...	32	...	175	...	237	...	237
Cycles and motor cars	387	157	2	533	23	681	6	2,815	27	4,186	58	4,244
Perambulators, &c.	7	9	...	20	1	15	2	89	1	133	4	137
Saddlery, harness, &c.	20	2	1	6	1	7	4	99	19	114	25	139
Naves, spokes, &c.	1	...	...	...	...	...	2	...	3	...	5	5
Whips	2	...	...	1	...	...	...	8	...	9	...	9
Total, Class 11	455	173	3	585	25	735	14	3,186	50	4,679	92	4,771
CLASS 12.—SHIPBUILDING FITTINGS, &c.												
Docks and slips	2	1	...	15	...	34	...	195	...	245	...	245
Sailmaking	7	1	1	3	...	2	...	18	2	24	3	27
Ship and boat building	21	4	...	36	...	38	...	622	2	700	2	702
Total, Class 12	30	6	1	54	...	74	...	835	4	969	5	974

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 13.—FURNITURE, BEDDING, &C.												
Bedding, flock, and upholstery	78	61	52	124	86	150	106	685	263	1,020	507	1,527
Carpet-sewing	4	1	1	4	6	6	8	35	47	46	62	108
Iron bedsteads	6	18	...	28	...	17	...	188	...	251	...	251
Billiard tables	1	...	...	5	...	6	...	60	3	71	3	74
Chair-making	18	8	...	18	...	42	...	192	1	260	1	261
Furniture and cabinet-making—												
European	204	72	6	248	3	449	4	1,979	13	2,748	26	2,774
Chinese	15	...	...	...	...	...	...	130	...	130	...	130
Bamboo and wicker	14	4	...	9	1	20	...	104	1	137	2	139
Picture frames	25	8	4	18	8	15	16	81	37	122	65	187
Window blinds	11	7	4	7	8	5	11	40	33	59	56	115
Total, Class 13	376	179	67	461	112	710	145	3,494	398	4,844	722	5,566
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c.	18	10	24	16	59	17	97	100	102	143	282	425
Chemical works and drugs	65	48	82	80	134	57	127	421	230	606	573	1,179
Fertilisers	3	...	...	1	...	1	...	30	...	32	...	32
Perfumes and essences	10	7	29	6	22	14	39	26	32	53	122	175
Paints and varnishes	20	52	9	57	4	60	24	395	23	564	60	624
Other minor works	6	1	1	5	...	7	...	72	...	85	1	86
Total, Class 14 ..	122	118	145	165	219	156	287	1,044	387	1,483	1,038	2,521
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	29	5	...	25	4	31	1	104	6	165	11	176
Surgical instruments...	4	1	...	2	1	2	1	17	3	22	5	27
Other minor works	4	1	...	2	...	...	1	5	1	8	2	10
Total, Class 15	37	7	...	29	5	33	3	126	10	195	18	213
CLASS 16.—TIMEPIECES, JEWELLERY, AND PLATED WARE.												
Electroplating	33	11	...	41	...	41	1	161	6	254	7	261
Jewellery	73	29	12	42	21	59	32	383	51	513	116	629
Total, Class 16	106	40	12	83	21	100	33	544	57	767	123	890
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	108	92	11	404	41	399	72	1,337	86	2,232	210	2,442
Electric light and power works	46	3	...	14	...	15	...	512	2	544	2	546
Gas works	6	11	...	11	...	25	...	1,007	...	1,054	...	1,054
Lamps and gas mantles	6	2	...	5	25	9	37	23	36	39	98	137
Hydraulic power	2	1	...	1	...	...	...	25	...	27	...	27
Coke works	4	3	...	1	...	2	...	62	...	68	...	68
Total, Class 17	172	112	11	436	66	450	109	2,966	124	3,964	310	4,274
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy leather	13	9	35	16	47	14	56	72	60	111	198	309
Leather belting	5	3	...	7	...	5	...	43	...	58	...	58
Portmanteaux	10	30	16	37	25	43	30	155	25	265	96	361
Other minor works	22	26	27	13	48	21	72	116	67	176	214	390
Total, Class 18	50	68	78	73	120	83	158	386	152	610	508	1,118
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting ...	3	...	...	...	...	...	...	14	...	14	...	14
Brooms, brushes	27	34	17	24	21	29	20	153	25	240	83	323
Florists and seedsmen	7	1	11	2	11	1	6	17	13	21	41	62
Laundries—European	129	8	77	29	174	29	256	236	927	302	1,434	1,736
Chinese	14	...	...	...	...	...	1	19	1	19	2	21
Rubber goods	10	48	31	73	67	108	136	824	436	1,053	670	1,723
Toys	10	9	1	12	4	18	8	31	5	70	18	88
Painting and signwriting	13	5	1	8	2	26	1	397	6	436	10	446
Other minor works	37	28	21	31	59	52	75	331	95	412	250	692
Total, Class 19	250	133	159	179	338	263	503	2,022	1,508	2,597	2,508	5,105
Total, All Industries ...	6,877	3,462	4,979	7,156	7,387	9,055	8,855	60,723	18,314	80,396	39,535	119,931

Appendix V.

Persons employed, by Class of Factory—1923-27.

Class of Factory.	1923.	1924.	1925.	1926.	1927.
Metropolitan District.					
I. Treating raw material, product of pastoral pursuits	2,246	1,959	2,068	2,231	2,334
II. Oils and fats—animal, vegetable, &c.	764	696	616	770	750
III. Processes relating to stone, clay, glass, &c.	5,768	5,801	6,272	6,757	6,497
IV. Working in wood	5,098	5,063	5,046	5,750	5,445
V. Metal works, machinery, &c.	16,611	17,445	18,154	21,028	19,560
VI. Connected with food and drink, &c.	13,857	14,731	14,416	15,650	16,758
VII. Clothing and textile fabrics, &c.	27,393	27,600	29,207	32,694	32,215
VIII. Books, paper, printing, engraving, &c.	8,608	8,914	9,107	9,772	10,209
IX. Musical instruments, &c.	686	678	695	929	713
X. Arms and explosives	32	31	23	24	18
XI. Vehicles and fittings, saddlery, harness, &c.	4,602	4,457	4,950	5,528	4,771
XII. Ship and boat building, &c.	1,760	1,073	960	916	974
XIII. Furniture, bedding, &c.	4,731	5,035	5,238	5,576	5,566
XIV. Drugs, chemicals, and by-products	2,129	2,206	2,352	2,523	2,521
XV. Surgical and other scientific instruments	187	182	236	228	213
XVI. Jewellery and plated-ware, &c.	787	980	946	895	890
XVII. Heat, light, and power	3,120	3,475	3,527	3,943	4,274
XVIII. Leatherware (excepting saddlery and harness)	1,055	1,048	1,178	1,330	1,118
XIX. Minor wares, n.e.i.	3,922	4,399	4,833	5,439	5,105
Total	103,356	105,773	109,824	121,983	119,931
Newcastle District.					
I. Treating raw material, product of pastoral pursuits	165	196	175	193	216
II. Oils and fats—animal, vegetable, &c.	176	179	150	167	139
III. Processes relating to stone, clay, glass, &c.	415	480	525	564	565
IV. Working in wood	1,525	1,457	1,430	1,193	1,062
V. Metal works, machinery, &c.	5,738	6,209	5,927	6,379	6,167
VI. Connected with food and drink, &c.	1,294	1,361	1,354	1,549	1,522
VII. Clothing and textile fabrics, &c.	1,203	1,104	1,066	1,108	972
VIII. Books, paper, printing, engraving, &c.	324	342	351	348	408
IX. Musical instruments, &c.	7	10	11	10	13
XI. Vehicles and fittings, saddlery, harness, &c.	404	394	472	514	482
XII. Ship and boat building, &c.	62	39	47	46	30
XIII. Furniture, bedding, &c.	223	243	249	249	256
XIV. Drugs, chemicals, and by-products	88	128	124	61	53
XV. Surgical and other scientific instruments	6	4	6	6	3
XVI. Jewellery and plated-ware, &c.	16	13	10	25	11
XVII. Heat, light and power	795	800	724	505	617
XIX. Minor wares, n.e.i.	128	144	148	104	139
Total	12,569	13,103	12,769	13,021	12,655
Rest of State.					
I. Treating raw material, product of pastoral pursuits	496	386	483	471	432
II. Oils and fats—animal, vegetable, &c.	30	27	25	25	23
III. Processes relating to stone, clay, glass, &c.	1,795	1,699	1,785	1,342	1,458
IV. Working in wood	2,659	2,563	2,648	2,928	2,554
V. Metal work, machinery, &c.	2,648	2,467	2,491	2,440	2,536
VI. Connected with food and drink, &c.	3,021	3,499	3,498	3,435	3,675
VII. Clothing and textile fabrics, &c.	1,553	1,606	1,519	1,809	1,726
VIII. Books, paper, printing, engraving, &c.	738	738	741	860	842
XI. Vehicles and fittings, saddlery, harness, &c.	1,595	1,597	1,677	1,964	1,795
XII. Ship and boat building, &c.	.....	.....	1	8	1
XIII. Furniture, bedding, &c.	156	141	152	162	133
XIV. Drugs, chemicals, and by-products	80	75	67	59	70
XV. Surgical and other scientific instruments	2	1	1	1	2
XVI. Jewellery and plated-ware, &c.	13	10	3	6	5
XVII. Heat, light and power	781	838	806	885	894
XIX. Minor wares, n.e.i.	159	193	197	223	226
Total	15,636	15,840	16,094	16,618	16,372
State.					
I. Treating raw material, product of pastoral pursuits	2,907	2,541	2,726	2,895	2,982
II. Oils and fats—animal, vegetable, &c.	970	902	791	962	912
III. Processes relating to stone, clay, glass, &c.	7,978	7,980	8,582	8,663	8,520
IV. Working in wood	9,282	9,083	9,124	9,871	9,061
V. Metal work, machinery, &c.	24,997	26,121	26,572	29,847	28,263
VI. Connected with food and drink, &c.	18,172	19,591	19,268	20,634	21,955
VII. Clothing and textile fabrics, &c.	30,149	30,310	31,792	35,611	34,913
VIII. Books, paper, printing, engraving, &c.	9,670	9,994	10,199	10,980	11,459
IX. Musical instruments, &c.	693	688	706	939	726
X. Arms and explosives	32	31	23	24	18
XI. Vehicles and fittings, saddlery, harness, &c.	6,511	6,448	7,099	8,006	7,048
XII. Ship and boat building, &c.	1,822	1,112	1,008	970	1,005
XIII. Furniture, bedding, &c.	5,110	5,419	5,639	5,987	5,955
XIV. Drugs, chemicals, and by-products	2,297	2,409	2,543	2,643	2,644
XV. Surgical and other scientific instruments	195	187	243	235	218
XVI. Jewellery and plated-ware, &c.	816	1,003	959	926	906
XVII. Heat, light, and power	4,696	5,113	5,057	5,333	5,785
XVIII. Leatherware (excepting saddlery and harness)	1,055	1,048	1,178	1,330	1,118
XIX. Minor wares, n.e.i.	4,209	4,736	5,178	5,766	5,470
Total	131,561	134,716	138,687	151,622	148,958

Appendix VI.

Persons employed, by Age Groups—1923-1927.

Metropolitan District.

Year.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		Over 21 years		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1923	6,573	2,825	3,951	5,585	5,925	7,513	7,645	54 099	15,813	70,022	33,334	103,356
1924	6,868	2,949	3,893	6,166	6,100	7,753	7,794	54,774	16,344	71,642	34,131	105,773
1925	6,947	3,044	4,260	6,368	6,555	7,948	7,961	56,736	16,952	74,096	35,728	109,824
1926	6,837	3,666	4,801	7,076	7,268	9,102	9,007	62,674	18,389	82,518	39,465	121,983
1927	6,877	3,462	4,979	7,156	7,387	9,055	8,855	60,723	18,314	80,396	39,535	119,931

Newcastle District.

1923	1,171	201	143	800	287	921	342	9,427	448	11,349	1,220	12,569
1924	1,211	173	107	786	271	946	360	10,016	444	11,921	1,182	13,103
1925	1,245	201	132	830	225	979	335	9,608	459	11,618	1,151	12,769
1926	1,217	247	158	829	272	918	365	9,758	474	11,752	1,269	13,021
1927	1,147	239	141	808	234	1,031	297	9,483	422	11,561	1,094	12,655

Rest of State.

1923	3,314	253	116	957	262	1,040	225	12,305	478	14,555	1,081	15,636
1924	3,480	294	98	915	238	1,126	265	12,404	500	14,739	1,101	15,840
1925	3,644	312	94	954	197	1,188	255	12,603	491	15,057	1,037	16,094
1926	3,775	337	136	1,061	241	1,254	309	12,728	572	15,380	1,238	16,618
1927	3,389	391	155	1,139	290	1,424	322	12,107	544	15,061	1,311	16,372

State.

1923	11,058	3,279	4,210	7,342	6,474	9,474	8,212	75,831	16,739	95,926	35,635	131,561
1924	11,559	3,416	4,098	7,867	6,609	9,825	8,419	77,194	17,288	98,302	36,414	134,716
1925	11,836	3,557	4,486	8,152	6,977	10,115	8,551	78,947	17,902	100,771	37,916	138,687
1926	11,829	4,250	5,095	8,966	7,781	11,274	9,681	85,160	19,415	109,650	41,972	151,622
1927	11,413	4,092	5,275	9,103	7,911	11,510	9,474	82,313	19,280	107,018	41,940	148,958

Appendix VII.

Horse-power of Machinery, by Class of Factory and Method of Production, Classified by Industry, 1927.

METROPOLITAN DISTRICT.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 1.—TREATING RAW MATERIALS, &c.									
Boiling-down and tallow refining	7	134	97	1	120	80	6	395	349
Glue	1	700	682	...	...	...	1	448	314
Tanning	14	381	233	10	353	268	48	2,573	2,079
Woolscouring and fellmongering and packing skins	9	688	485	1	2	2	22	1,756	1,286
Chaff-cutting	...	...	...	...	...	...	18	770	560
Total	31	1,903	1,497	12	475	350	95	5,942	4,588
CLASS 2.—OILS AND FATS.									
Oil and grease	4	63	33	1	11	10	6	553	472
Soap and candles	7	782	339	...	...	...	12	1,822	1,448
Total	11	845	372	1	11	10	18	2,375	1,920
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.									
Asphalt	1	12	12	...	...	...	11	179	167
Bricks and tiles	22	3,494	2,402	5	489	409	58	11,076	9,453
Glass and glass bottles	3	824	489	...	...	...	6	1,583	1,397
Glass (ornamental)	...	...	...	1	4	3	21	334	267
Cement	...	...	...	1	175	...	7	782	399
Marble and slate	...	...	...	1	14	8	10	658	551
Modelling and fibrous plaster	1	5	3	...	...	...	12	114	101
Monumental masons	1	10	6	...	...	...	5	307	267
Pottery and earthenware	3	193	118	2	47	41	9	946	786
Stone-dressing	4	253	230	1	275	275	15	858	764
Other works	1	40	30	1	32	18	17	674	615
Total	36	4,831	3,299	12	1,036	754	171	17,511	14,767
CLASS 4.—WORKING IN WOOD.									
Incubators	...	...	...	...	...	...	1	2	2
Boxes and packing-cases	3	770	620	1	1	1	48	1,095	992
Cooperage	1	1	1	...	...	...	8	246	184
Joinery	7	381	306	13	148	105	201	4,087	3,244
Saw-milling—timber	22	4,803	3,247	1	10	10	53	8,582	6,415
firewood	17	222	179	...	...	...	17	247	232
Wood-turning	...	...	...	1	8	4	18	196	143
Other works	...	...	...	1	15	15	31	396	324
Total	50	6,187	4,353	17	182	135	377	14,851	11,536
CLASS 5.—METAL WORKS, MACHINERY, &c.									
Agricultural implements	...	...	...	3	63	47	6	221	173
Brass and copper	3	353	339	...	...	...	71	696	587
Cutlery	...	...	...	...	...	...	26	511	389
Engineering	13	2,095	1,667	11	684	427	257	11,887	10,203
Galvanised iron	...	...	...	1	7	7	42	559	436
Iron works, foundries, and boiler-making	14	697	521	5	76	63	121	6,354	3,626
Iron safes and doors	...	...	...	...	...	...	5	226	150
Lead-mills	...	...	...	...	...	...	2	84	84
Railway carriage works	1	140	95	...	...	...	2	83	73
Smelting and ore-dressing	1	20	...	...	...	...	2	824	160
Stoves and ovens	...	...	...	1	25	15	11	2,080	1,402
Tinsmithing	...	...	...	...	...	...	15	569	452
Wire-working	...	...	...	...	...	...	20	3,033	2,662
Other metal works	...	...	...	2	109	71	73	1,212	788
Plumbing	...	...	...	...	...	...	4	14	14
Farriery	...	...	...	...	...	...	8	17	16
Total	32	3,305	2,622	23	964	630	665	28,370	21,515
CLASS 6.—CONNECTED WITH FOOD AND DRINK, &c.									
Bacon	4	153	125	...	...	...	8	385	343
Butchers' small-goods	11	718	662	8	53	38	552	2,711	2,418
Margarine	1	25	20	...	...	...	2	413	378
Meat-preserving	2	17	12	...	...	...	5	566	540
Biscuits	2	138	113	...	...	...	6	1,676	631
Bread and pastry	10	160	93	10	140	109	303	1,859	1,673
Confectionery	7	1,393	1,238	1	900	250	88	4,628	3,502
Corn-flour and oatmeal	3	44	37	...	...	...	12	1,364	1,050
Flour-milling	3	1,185	1,241	1	20	15	17	2,913	2,591
Jam and fruit preserving	4	54	49	...	...	...	16	350	300
Pickles, sauces, and vinegar	...	...	...	...	...	...	4	135	128
Dog biscuits and poultry foods	...	...	...	1	188	188	12	882	794
Self-raising flour	...	...	...	1	2	2	4	90	75
Sugar refining	1	179	157	...	...	...	1	4,495	4,495
Aerated waters	3	13	11	3	43	39	25	641	474
Brewing	4	2,067	1,328	1	14	10	7	2,213	1,488
Condiments, Eastern goods, &c.	5	640	568	1	4	4	29	674	611
Distillery	...	...	...	...	...	...	3	284	284
Ice and refrigerating	9	2,057	1,337	16	1,450	1,036	92	5,882	5,009
Tea-blending	...	...	...	...	...	...	10	391	344
Wines and spirits	2	328	210	...	...	...	17	704	535
Tobacco, cigars, &c.	2	1,728	958	...	...	...	6	941	471
Total	73	11,199	8,159	43	2,814	1,691	1,219	34,227	28,134

Appendix VII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
Class 7.—Clothing and Textile Fabrics, &c.									
Woollen mills	4	426	426	1	200	180	25	5,265	4,703
Boots and shoes—order and repairing	1	1	1	4	10	6	498	685	644
factory made	1	230	...	2	125	75	92	1,725	1,561
Clothing—men's slops	1	15	15	...	...	...	55	477	441
women's slops	1	1	1	1	4	4	129	320	294
tailoring	...	...	...	...	...	...	86	265	233
Corsets	1	1	1	...	...	...	5	249	179
Dressmaking—makers' materials	2	5	5	2	8	8	91	193	179
customers' materials	...	...	...	1	3	2	46	299	296
Dye works	9	261	162	...	...	...	20	426	331
Furriery	...	...	...	...	...	...	30	1,262	1,234
Hats and caps	1	25	15	...	...	...	28	633	537
Hosiery, knitting, &c.	2	18	9	3	26	25	61	1,877	1,421
Oilskins and waterproof clothing	...	...	...	...	...	...	6	79	75
Shirts, ties, and scarfs	...	...	...	1	17	...	50	308	280
Umbrellas	...	...	...	...	...	...	5	9	9
Underclothing	2	11	11	...	...	...	92	233	220
Wigs and hairwork	...	...	...	...	...	...	...	...	...
Bags and sacks	...	...	...	...	...	...	6	432	364
Rope and twine	...	...	...	1	176	176	6	468	433
Tents and tarpaulins	...	...	...	...	...	...	11	73	60
Total	25	994	646	16	569	476	1,342	15,278	13,494
Class 8.—Books, Paper, Printing, Engraving.									
Die-sinking and engraving	...	...	...	...	...	...	21	99	82
Electro and stereo-typing, printers' materials, &c.	...	...	...	1	2	2	13	216	177
Paper bags and boxes	...	...	...	1	20	15	16	895	718
Paper-mills	1	1,958	1,695	1	38	38	6	2,277	2,662
Photo.-engraving, photo. materials, &c.	1	3	3	...	...	...	15	115	100
Printing, bookbinding, and stationery	1	20	10	19	289	190	316	7,756	6,082
Total	3	1,981	1,708	22	349	245	387	11,358	9,821
Class 9.—Musical Instruments, &c.									
Pianos and sewing-machines	...	...	...	...	...	...	18	755	740
Class 10.—Arms and Explosives.									
Explosives	...	...	...	...	...	...	3	28	19
Class 11.—Vehicles, Saddlery, Harness, &c.									
Coaches and waggons	1	8	6	2	18	17	32	285	202
Cycles and motor-cars	3	5	4	8	58	40	360	3,047	2,589
Perambulators	...	...	...	...	...	...	6	27	23
Saddlery and harness	...	...	...	...	...	...	15	56	43
Naves and spokes	...	...	...	1	4	3	1	2	2
Whips	...	...	...	...	...	...	...	...	...
Total	4	13	10	11	80	60	414	3,417	2,859
Class 12.—Shipbuilding, &c.									
Docks and slips	2	2,376	2,068	...	...	...	1	1,731	1,245
Sailmaking	...	...	...	1	5	5	6	9	9
Ship and boat building	4	234	144	4	37	35	18	633	453
Total	6	2,610	2,212	5	42	40	25	2,373	1,707
Class 13.—Furniture, Bedding, &c.									
Bedding and flock	5	94	83	1	2	...	61	1,207	1,078
Carpet-sewing	...	...	...	...	...	...	2	27	27
Iron bedsteads	...	...	...	...	...	...	6	438	413
Billiard-tables	...	...	...	...	...	...	1	122	97
Chair-making	1	50	48	...	...	...	18	308	276
Furniture—European	...	...	...	3	47	42	191	3,596	3,180
Chinese	...	...	...	...	...	...	9	94	80
Bamboo and Wicker	...	...	...	...	...	...	...	...	...
Picture frames	...	...	...	1	5	5	22	133	132
Window blinds	...	...	...	...	...	...	13	41	36
Total	6	144	131	5	54	47	323	5,966	5,319
Class 14.—Drugs, Chemicals, and By-products.									
Blue, baking-powder, soda, &c.	2	28	28	...	...	...	11	610	498
Chemical works and drugs	7	189	134	2	26	4	53	1,639	1,330
Fertilisers	1	8	6	...	...	...	1	78	70
Perfumes and essences	1	4	4	...	...	...	10	141	129
Paints and varnishes	1	12	6	...	...	...	19	2,418	1,470
Other minor works	1	8	2	...	...	...	6	443	338
Total	13	249	180	2	26	4	100	5,329	3,825

Appendix VII—*continued.*

Class of Factory	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.									
Optical instruments	...	...	...	...	...	...	29	108	91
Surgical instruments	...	...	...	...	...	...	4	13	12
Other minor works	...	...	...	...	...	...	4	5	4
Total	...	...	...	...	...	...	37	126	107
CLASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.									
Electro-plating	...	...	...	1	26	20	32	382	325
Jewellery	...	...	...	1	4	...	69	264	224
Total	...	...	...	2	30	20	101	646	549
CLASS 17.—LIGHT, HEAT, AND POWER.									
Electrical apparatus	...	...	...	...	...	...	103	1,095	1,069
Electric light and power works	2	119,718	68,150	17	602	421	38	2,241	2,023
Gas	4	2,158	1,707	4	761	628	4	448	387
Lamps and gas mantles	...	...	...	...	...	...	5	105	74
Hydraulic power	2	1,675	822	...	...	...	1	145	120
Coke works	1	90	70	...	...	...	3	508	340
Total	9	123,641	70,749	21	1,363	1,049	154	4,542	4,014
CLASS 18.—LEATHERWARE (EXCEPTING SADDLERY AND HARNESS).									
Fancy leather	1	8	5	...	...	...	12	130	108
Leather belting	...	...	...	...	...	...	5	57	48
Portmanteaux and bags	...	...	...	1	14	6	8	92	78
Other minor works	...	...	...	1	5	5	21	101	90
Total	1	8	5	2	19	11	46	380	324
CLASS 19.—MINOR WARES (NOT ELSEWHERE INCLUDED).									
Baskets, &c.	...	...	...	...	...	...	...	...	...
Brooms and brushes	...	...	...	...	...	...	25	143	123
Florists and seedsmen	...	...	...	...	...	...	4	52	40
Laundries—European	33	503	326	3	20	8	120	1,301	1,160
,, Chinese	...	...	...	...	...	...	...	...	...
Rubber goods	4	358	258	...	...	...	10	7,999	4,652
Toys	...	...	...	...	...	...	9	87	76
Painting and signwriting	...	...	...	...	...	...	7	50	50
Other minor works	2	580	415	...	...	...	24	1,293	845
Total	39	1,441	999	3	20	8	199	10,925	6,946
Total, All Classes	339	159,351	96,942	197	8,034	5,530	5,694	164,399	132,194

Appendix VIII.

Horse-power of Machinery used and Method of Production, by Class of Factory, 1927.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
METROPOLITAN DISTRICT.									
I. Treating raw materials, product of pastoral pursuits	31	1,903	1,497	12	475	350	95	5,942	4,588
II. Oils and fats—animal, vegetable, &c.	11	845	372	1	11	10	18	2,375	1,920
III. Processes in stone, clay, glass, &c.	36	4,831	3,299	12	1,036	754	171	17,511	14,767
IV. Working in wood	50	6,187	4,353	17	182	155	377	14,851	11,536
V. Metal works, machinery, &c.	32	3,305	2,622	23	964	630	665	28,370	21,515
VI. Connected with food and drink, &c.	73	11,199	8,159	43	2,814	1,691	1,219	34,227	28,134
VII. Clothing and textile fabrics, &c.	25	994	646	16	569	476	1,342	15,278	13,494
VIII. Books, paper, printing, and engraving, &c. ...	3	1,981	1,708	22	349	245	387	11,358	9,821
IX. Musical instruments, &c.	...	...	...	...	...	...	18	755	740
X. Arms and explosives...	...	...	...	...	...	...	3	28	19
XI. Vehicles and fittings, saddlery and harness, &c ...	4	13	10	11	80	60	414	3,417	2,859
XII. Ship and boat building, &c.	6	2,610	2,212	5	42	40	25	2,373	1,707
XIII. Furniture, bedding, &c.	6	144	131	5	54	47	323	5,966	5,319
XIV. Drugs, chemicals, and by-products	13	249	180	2	26	4	100	5,329	3,835
XV. Surgical and other scientific instruments	...	...	...	...	...	...	37	126	107
XVI. Jewellery and plated-ware, &c.	...	...	...	2	30	20	101	646	549
XVII. Heat, light, and power	9	123,641	70,749	21	1,363	1,049	154	4,542	4,014
XVIII. Leatherware, n.o.i	1	8	5	2	19	11	46	380	324
XIX. Minor wares, n.o.i.	39	1,441	999	3	20	8	199	10,925	6,946
Total	339	159,351	96,942	197	8,034	5,530	5,694	164,399	132,194

Appendix VIII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
Newcastle District.									
I. Treating raw materials, product of pastoral pursuits	1	70	70	...	...	...	14	1,075	818
II. Oils and fats—animal, vegetable, &c.	3	114	53	...	...	...	2	125	77
III. Processes in stone, clay, glass, &c.	20	1,040	772	1	173	80	21	487	371
IV. Working in wood	81	2,798	2,260	12	93	76	65	1,410	1,037
V. Metal works, machinery, &c.	8	53,600	34,181	4	46	43	55	36,553	7,125
VI. Connected with food and drink, &c.	39	3,240	1,817	26	604	457	231	4,003	2,986
VII. Clothing and textile fabrics, &c.	3	22	21	...	...	...	79	199	166
VIII. Books, paper, printing and engraving, &c. ...	...	...	...	5	116	88	37	558	385
XI. Vehicles and fittings, saddlery and harness, &c. ...	2	24	16	4	16	12	99	425	351
XII. Ship and boat building, &c.	3	28	20	4	25	18	2	8	6
XIII. Furniture, bedding, &c.	...	...	...	4	54	38	22	321	287
XIV. Drugs, chemicals, &c.	...	...	...	...	...	...	4	343	297
XV. Surgical and other scientific instruments	...	...	...	...	...	...	2	2	2
XVI. Jewellery and plated-ware, &c.	...	...	...	...	...	...	2	16	12
XVII. Heat, light, and power	6	2,556	1,984	14	676	551	42	5,391	3,981
XIX. Minor wares, n.e.i.	4	47	20	2	32	10	8	53	48
Total	170	63,539	41,214	76	1,835	1,373	685	50,969	17,949
Rest of State.									
I. Treating raw materials, product of pastoral pursuits	59	870	684	8	111	82	23	281	239
II. Oils and fats—animal, vegetable, &c.	5	42	31	...	...	...	...	...	...
III. Processes in stone, clay, glass, &c.	35	11,789	9,086	2	45	26	51	12,827	8,794
IV. Working in wood	300	7,530	6,069	46	649	498	62	2,612	1,879
V. Metal works, machinery, &c.	8	15,902	13,268	23	224	140	67	8,282	5,985
VI. Connected with food and drink, &c.	98	7,986	5,688	155	4,826	3,282	648	7,586	5,249
VII. Clothing and textile fabrics, &c.	6	282	253	9	69	54	98	1,070	983
VIII. Books, paper, printing, engraving, &c.	3	18	4	30	205	116	156	961	733
XI. Vehicles and fittings, saddlery and harness, &c. ...	11	163	87	63	589	398	394	1,625	1,250
XII. Ship and Boat Building, &c.	...	...	...	...	...	...	...	...	...
XIII. Furniture, bedding, &c.	1	6	4	3	22	18	34	209	131
XIV. Drugs, chemicals, &c.	...	...	...	1	5	5	2	598	478
XV. Surgical and other scientific instruments, &c ...	...	...	...	...	...	...	1	1	1
XVI. Jewellery and plated-ware, &c.	...	...	...	...	...	...	2	3	3
XVII. Heat, light, and power	37	11,416	10,030	74	6,043	4,694	142	11,833	7,716
XIX. Minor wares, n.e.i.	12	170	129	2	73	54	15	129	102
Total	575	56,174	45,333	416	12,861	9,367	1,695	48,017	33,543
State.									
I. Treating raw materials, product of pastoral pursuits	91	2,843	2,251	20	586	432	132	7,298	5,645
II. Oils and fats—animal, vegetable, &c.	19	1,001	456	1	11	10	20	2,500	1,997
III. Processes in stone, clay, glass, &c.	91	17,660	13,157	15	1,254	860	243	30,825	23,932
IV. Working in wood	431	16,515	12,682	75	924	709	504	18,873	14,452
V. Metal works, machinery, &c.	48	72,807	50,071	50	1,234	813	787	73,205	34,625
VI. Connected with food and drink, &c.	210	22,425	15,664	224	8,244	5,430	2,098	45,816	36,369
VII. Clothing and textile fabrics, &c.	34	1,298	920	25	638	530	1,519	16,547	14,643
VIII. Books, paper, printing, and engraving, &c. ...	6	1,999	1,712	57	670	449	589	12,877	10,939
IX. Musical instruments, &c.	...	...	...	...	...	...	18	755	740
X. Arms and explosives, &c.	...	...	...	...	...	...	3	28	19
XI. Vehicles and fittings, saddlery and harness, &c. ...	17	200	113	78	685	470	907	5,467	4,460
XII. Ship and boat building, &c.	9	2,638	2,232	9	67	58	27	2,381	1,713
XIII. Furniture, bedding, &c.	7	150	135	12	130	103	379	6,496	5,737
XIV. Drugs, chemicals, and by-products	13	249	180	3	31	9	106	6,270	4,610
XV. Surgical and other scientific instruments	...	...	...	...	...	...	40	129	110
XVI. Jewellery and plated-ware, &c.	...	...	...	2	30	20	105	665	564
XVII. Heat, light, and power	52	137,613	82,763	109	8,082	6,294	338	21,766	15,711
XVIII. Leatherware, n.e.i.	1	8	5	2	19	11	46	380	324
XIX. Minor wares, n.e.i.	55	1,658	1,148	7	125	72	222	11,107	7,096
Total	1,084	279,064	183,489	689	22,730	16,270	8,074	263,385	183,686

Appendix IX.

Horse-power of Machinery used and Method of Production—1923-1927.

Year.	Steam.		Gas.		Electricity and other.		Total.	
	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	*No. of Factories.	Horse-power.
Metropolitan District.								
1923	348	80,287	384	6,906	4,517	80,105	5,249	167,298
1924	354	83,968	337	6,988	4,938	91,493	5,629	182,449
1925	349	88,435	288	6,013	5,222	99,719	5,859	194,167
1926	369	100,314	250	5,836	5,403	113,152	6,022	219,302
1927	339	96,942	197	5,530	†5,694	132,194	6,230	234,666
Newcastle District.								
1923	210	37,395	121	1,611	425	9,783	756	48,789
1924	248	39,509	107	1,497	525	11,667	880	52,673
1925	235	41,081	97	1,695	544	13,106	876	55,882
1926	209	43,936	130	1,641	461	16,720	800	62,297
1927	170	41,214	76	1,373	†885	17,949	931	60,536
Rest of State.								
1923	651	27,519	486	8,399	1,127	12,108	2,264	48,026
1924	752	41,529	534	8,906	1,277	24,845	2,563	75,280
1925	722	41,664	516	9,945	1,459	24,571	2,697	76,180
1926	711	37,673	513	10,938	1,655	29,409	2,879	78,020
1927	575	45,333	415	9,367	†1,695	33,543	2,686	88,243
State.								
1923	1,209	145,201	991	16,916	6,069	101,996	8,269	264,113
1924	1,354	165,006	978	17,391	6,740	128,005	9,072	310,402
1925	1 306	171,180	901	17,653	†7,225	†137,396	9,432	326,229
1926	1,289	181,923	893	18,415	7,519	159,281	9,701	359,619
1927	1,084	183,489	689	16,270	†8,074	183,686	9,847	383,445

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using power.

† Including 49 factories using oil of 1,837 horse-power (Metropolitan District).
,, 66 ,, ,, 1,116 ,, (Newcastle District).
,, 440 ,, ,, 5,928 (Rest of State).
,, 555 ,, ,, 8,881 (State).

Appendix X.

Employment of Children.

Certificates of Fitness by class of Factory in Districts, 1927.

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Class 1.—Treating Raw Material—the Products of Pastoral Pursuits.									
Glue and gelatine	4	...	...	...	...	...	...	...	4
Tanneries	38	1	...	...	...	...	...	...	39
Wool scouring	9	...	...	...	...	...	...	...	9
Class 2.—Oils and Fats—Animal and Vegetable.									
Kerosene and oil	12	1	...	...	...	...	...	...	13
Soap, &c.	36	22	15	2	...	...	3	...	78
Class 3.—Processes in Stone, Clay, Glass, &c.									
Bricks, tiles, and pottery ...	206	2	7	...	...	...	4	...	219
Glass and bottle	78	1	...	...	...	...	...	...	79
Lime and cement	9	...	12	...	...	...	2	...	23
Class 4.—Working in Wood.									
Sawmills and joinery ...	69	3	6	...	...	...	8	...	86
Other woodworking	33	5	...	...	...	...	...	...	38
Class 5.—Metal Works and Machinery, &c.									
Brass and copper	63	4	...	...	...	...	...	...	67
Cutlery and tools	2	4	...	...	...	...	...	...	6
Engineering	390	10	64	...	...	...	17	...	481
Ironworks, stoves, &c. ...	170	4	52	...	...	...	18	...	244
Smelting and ore works ...	4	...	5	...	...	...	1	...	10
Wire works	44	2	39	...	...	...	2	...	87

Appendix X—*continued.*

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Class 6.—Connected with Food and Drink, and the Preparation thereof.									
Aerated waters	13	...	8	...	1	...	4	...	26
Biscuits	309	212	9	3	...	...	2	...	535
Bread and pastry	39	5	4	...	...	...	5	...	53
Condiments	3	12	...	...	...	...	...	...	15
Confectionery	92	294	6	10	...	...	8	4	414
Flour mills	8	3	...	...	...	...	3	...	14
Groceries and packing	56	104	9	...	...	...	5	1	175
Ice and refrigerating	6	...	2	...	...	...	3	...	11
Jam	9	6	...	...	...	...	1	...	16
Meat preserving	12	3	32	...	1	...	...	...	48
Sugar mills	3	2	...	...	...	...	...	...	5
Tobacco	39	100	...	...	...	...	...	...	139
Class 7.—Clothing and Textile Fabrics, and Fibrous Materials.									
Artificial flowers	2	30	...	...	...	...	...	...	32
Bags	12	22	...	...	...	...	...	...	34
Boots and shoes	229	269	4	...	...	...	4	1	507
Clothing	24	215	3	74	...	...	...	36	352
Corsets	...	63	...	...	...	...	...	...	63
Cotton mills	37	36	...	...	...	...	...	3	76
Dressmaking	8	774	...	10	...	...	...	8	800
Furriery	18	35	...	...	...	...	...	...	53
Hats and caps	52	79	...	...	...	...	...	...	131
Hosiery and knitting	50	319	...	...	...	...	1	2	372
Rope	52	30	...	...	...	...	...	...	82
Shirts	22	425	...	43	...	...	...	...	490
Tailoring	44	470	...	...	...	...	...	...	514
Tents, &c.	19	2	...	...	...	...	...	...	21
Umbrellas	5	20	...	...	...	...	...	...	25
Whiteworking	5	143	...	...	...	...	...	1	149
Woollen mills	75	105	...	...	...	...	28	35	243
Dye works and cleaning	4	...	...	...	...	...	...	...	4
Class 8.—Books, Papers, Printing, Engraving.									
Bookbinding	8	59	...	...	...	...	...	...	67
Paper boxes	69	128	3	7	...	...	...	...	207
Paper mills	10	6	...	...	...	...	...	...	16
Photography	8	22	...	...	...	...	...	...	30
Printing	291	170	8	4	...	...	13	...	486
Class 9.—Musical Instruments, &c. Pianos, Organs and Sewing Machines.									
Musical instruments	31	11	...	...	...	...	...	...	42
Class 10.—Arms and Explosives.									
Arms, ammunition, explosives	...	1	...	...	...	...	...	...	1
Class 11.—Vehicles and Fittings, Saddlery, Harness, &c.									
Coachbuilding	19	...	5	...	...	...	...	...	24
Motors and cycles	120	6	7	...	...	...	14	...	147
Class 12.—Shipbuilding.									
Ship and boat building	2	...	...	...	...	...	...	...	2
Class 13.—Furniture, Bedding, &c.									
Bedsteads, bedding	36	18	2	...	...	...	...	...	56
Furniture	123	33	2	...	...	...	1	...	159
Class 14.—Drugs, Chemicals and By-Products.									
Blue, blacking, polishes, &c.	3	2	...	...	...	...	...	...	5
Chemicals	50	59	...	...	...	...	...	...	109
Perfumes and essences	1	12	...	...	...	...	...	...	13
Paints and varnishes	37	15	...	...	...	...	...	...	52
Class 15.—Surgical and Scientific Instruments.									
Optical and surgical instruments	6	6	...	...	...	...	...	...	12
Class 16.—Timepieces, Jewellery and Plated Ware.									
Jewellery	32	5	...	...	...	...	...	...	37
Class 17.—Light, Heat, and Power.									
Coke and gas	11	...	...	...	...	...	...	...	11
Electrical apparatus, wireless, &c.	203	12	...	...	...	...	...	...	215
Class 18.—Leatherware, excepting Harness and Saddlery.									
Leather bags, &c.	124	63	3	...	...	...	...	...	190
Class 19.—Minor Wares not elsewhere included.									
Brooms	37	10	...	...	...	...	...	...	47
Cooperage	2	...	...	...	...	...	...	...	2
Florists and seedsmen	...	4	...	...	...	...	...	...	4
Laundries	1	62	10	...	...	...	1	...	74
Plumbers and tinsmiths	169	43	3	...	...	...	2	...	217
Rubber goods	62	30	...	...	...	...	...	...	92
Toys	10	10	...	...	...	...	...	...	20
Miscellaneous	29	11	10	5	...	...	4	...	59
Total	3,908	4,635	310	158	2	...	154	91	9,273

Appendix XI.—Accidents by Machinery, 1924-27.

Machines.	1924	1925.	1926.	1927.
Metal Working Machines—				
Drills	13	16	13	19
Emery wheels	38	40	36	25
Guillotines	2	1	6	9
Lathes	23	21	20	31
Milling	4	2	4	6
Polishing	2	2	2	16
Power presses	37	37	39	21
Riveting	3	1	4	1
Rolling	10	10	5	6
Screwing	2	1	2	1
Shaping	1	2	1	4
Shears	13	7	6	7
Slotting	4	...	1	1
Steam hammers	15	15	...	3
Wire-working	109	144	74	67
Other tinsmiths' machines	...	...	3	10
Other ironworking machines	44	18	34	32
	320	317	250	259
Woodworking Machines—				
Band saws	6	7	11	8
Boring	3	3	2	1
Circular moulders	33	22	13	18
Circular saws	77	72	65	48
Jointers	19	...	14	22
Lathes	1	2	2	5
Planers	36	38	22	15
Other woodworking machines	5	15	26	30
	180	159	155	147
Printing Machines—				
Cardboard box machines	12	3	17	1
Envelope machines	2	2	3	2
Guillotines	2	...	3	...
Platens	7	13	11	12
Printing machines	15	11	14	9
Wire-stitching machines	19	24	13	16
Other printing machines	13	39	30	57
	70	92	91	97
Food and Drink Machines—				
Biscuit machines	8	1	4	2
Confectionery machines	3	10	3	8
Crown corking machines	...	...	...	...
Dough brakes	7	2	6	...
Mincing	10	10	9	8
Mixing	1	3	..	4
Tobacco	10	4	7	11
Other food and drink machines	6	9	13	33
	45	39	42	66

Machines.	1924	1925.	1926.	1927.
Stone, clay, &c., Machines—				
Brick presses	3	1	2	1
Pans	...	..	1	...
Tile presses	2	1	1	2
Other stone, &c., machines	1	1	8	4
	6	3	12	7
Leather Working Machines—				
Power presses	3	3	4	2
Rolling	...	3	4	...
Shaving	1	...	...	...
Other leather machines	5	11	12	9
	9	17	20	11
Clothing Machines—				
Band knives	...	..	...	...
Boot machines	9	2	12	22
Fur-cutting	...	...	...	...
Ropemaking	2	...	...	...
Sewing	8	7	6	8
Wool machines	10	11	17	27
Other clothing machines	2	7	10	8
	31	27	45	65
Laundry Machines—				
Calenders	6	4	10	3
Folding	...	...	...	...
Hydro-extractors	...	...	1	...
Ironing	3	4	6	3
Other Laundry machines	...	...	...	4
	9	8	17	10
Rubber Working Machines—				
Power presses	...	...	...	...
Rolling	5	...	1	...
Other rubber machines	7	3	12	19
	12	3	13	19
Brushmaking machines	1	...	...	...
Paintmaking machines	...	1	1	1
Soapmaking machines	5	4	4	2
Miscellaneous Machines—				
Elevators and cranes	57	33	36	13
Engines	5	2	4	...
Fan	1	2	...	...
Mill gearing	87	82	46	43
Other machines	31	23	34	25
	187	147	125	84
Total	869	812	770	765

Appendix XII.—Prosecutions by Districts, 1923-27.

Year.	Information Laid.	Convictions.	Dismissals.	Withdrawals.
		Metropolitan.		
1923	62	61	1	.....
1924	74	72	.....	2
1925	79	75	3	1
1926	79	72	4	3
1927	57	56	.....	1
		Newcastle		
1923	1	1	.....	.....
1924	7	7	.....	.....
1925	7	7	.....	.....
1926	5	5	.....	.....
1927	.....	.....	.....	.....
		Rest of State.		
1923	7	7	.....	.....
1924	8	8	.....	.....
1925	6	6	.....	.....
1926		6	.....	.....
1927		1	1	.....
		The State.		
1923	70	69	1	.....
1924	89	87	.....	2
1925	92	88	3	1
1926	90	83	4	3
1927	59	57	1	1

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LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

DEPARTMENT OF LABOUR AND INDUSTRY.

REPORT

ON THE WORKING OF THE

FACTORIES AND SHOPS ACT, 1912

DURING THE YEAR 1928

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THE THIRTY-SECOND SERIES OF ANNUAL REPORTS BY INSPECTORS APPOINTED UNDER THE FACTORIES AND SHOPS ACT, 1912, FURNISHED TO THE MINISTER FOR LABOUR AND INDUSTRY IN TERMS OF SECTION 19 OF THAT ACT.

The Under-Secretary, Department of Labour and Industry, to The Honorable the Minister for Labour and Industry.

Department of Labour and Industry,
14th August, 1929.

Sir,

I have the honour to forward for submission to Parliament, in terms of section 19 of the Factories and Shops Act, 1912, Annual Reports on the operations of that Act by each of the Inspectors appointed thereunder, for the year ending the 31st December, 1928.

I have, &c.,
F. W. KITCHING,
Under-Secretary.

OFFICE OF THE CHIEF INSPECTOR OF FACTORIES AND INVESTIGATION OFFICER.*

Operations.

Report in terms of Section 19 of the Factories and Shops Act, 1912.

Arrangement of Inspectorial Districts.

The provisions of the Factories and Shops Act were extended to cover the whole of the State, as from the 1st July, 1915. The area outside of the Metropolitan District is divided up into Country Districts, and the following statement will show the arrangement of these districts at the close of 1928 :—

District.	Head Centre.	Staff.
Newcastle	Newcastle	Superintending Inspector Clark.
		Inspector MacCubbin.
		,, Young.
North Coast	Sydney	,, Hastie.
North-Western	Sydney	,, Armstrong.
South Coast	Woonona	,, Waugh.
Southern	Sydney	,, Wallace.
South-Western	Sydney	,, McEvoy.
Western	Orange	,, Baker.
Broken Hill	Broken Hill	,, Bennet.
Central Western	Sydney	,, Varley.

The Country District Officers, in addition to the work of factory inspection and investigations under the Industrial Arbitration Act, are required to carry out work under the Early Closing Acts as well as that pertaining to the departmental policy of Country Labour Exchanges.

Inquiries emanating from the Immigration Section of the department also devolved upon the Inspectors in both the metropolis and the country.

The following new appointments, retirement, and alteration in control of districts were made during the year :—

Messrs. A. O. Butler, G. S. Reyburn, S. Smith, and J. Weir were appointed as Factory and Industrial Inspectors, and commenced duty in April. Later in the year, after a period of training, they were each placed in charge of a Metropolitan district. In November Inspector Butler was transferred to Broken Hill *vice* Inspector Bennet, transferred to Head Office.

Mr. Inspector Henstock, having reached the age limit, left the Service during July.

Mr. Inspector Armstrong took charge of the North-western district early in February, operating from Head Office.

Statistics.

Cards of instruction served on the occupiers of factories within the Metropolitan District numbered 12,801 for 1928, as compared with 13,231 in 1927; in the Newcastle District, 2,199 in 1928, as against 1,581 in 1927; in the Broken Hill District, 28 in 1928, compared with 72 in 1927; in the rest of the State 4,718, as against 4,557 in the previous year.

---

*Matters covered by the Boiler Inspection Regulations made under Section 62 of the Factories and Shops Act, 1912, are reported upon by the Departmental Engineer and Chief Inspector of Scaffolding and Lifts.

Returns collected from factory occupiers for 1928 show that at the date of collecting the returns (end of November, 1928) 11,421 factories throughout the State employed 148,598 persons, compared with 11,413 factories employing 148,958 persons at the end of 1927, an increase of 8 factories and a decrease of 360 persons. Male employment decreased by 2,041, there being an increase of 102 under 21 years of age, and a decrease of 1,143 over that age. Female employment increased by 681, there being a decrease of 300 under 21 years of age, and an increase of 981 over that age. Of the total persons employed, 105,977, or 71·3 per cent., were male, and 42,621, or 28·7 per cent., were female.

The following statement will show the increase or decrease in the number of factories and persons, males and females, employed therein, from the year 1915, when the whole of the State was brought under the provisions of the Act, to 1928 inclusive :—

Year.	Factories registered.	Increase over previous year.	Persons employed.		Total.	Increase over previous year.		Total	Percentage of total increase.	
			Males.	Females.		Males.	Females.		Males.	Females
1915	7,425	1,432	70,517	28,706	99,223	7,181	1,901	9,082	79·1	20·9
1916	8,065	640	63,895	28,757	92,652	*6,622	51	*6,571	*100·8	·8
1917	8,099	34	66,066	29,185	95,251	2,171	428	2,599	83·6	16·4
1918	8,346	247	74,719	31,246	105,965	8,653	2,061	10,714	80·8	19·2
1919	9,003	657	84,474	32,431	116,905	9,755	1,185	10,940	89·2	10·8
1920	9,745	742	92,566	33,479	126,045	8,092	1,048	9,140	88·6	11·4
1921	10,087	342	88,819	33,565	122,384	*3,747	86	*3,661	*102·3	2·3
1922	10,674	587	86,935	36,142	123,077	*1,884	2,577	693	*271·9	371·9
1923	11,058	384	95,926	35,635	131,561	8,991	*507	8,484	*105 9	5·9
1924	11,559	501	98,302	36,414	134,716	2,376	779	3,155	75·3	24·7
1925	11,836	277	100,771	37,916	138,687	2,469	1,502	3,971	62·1	37·9
1926	11,829	*7	109,650	41,972	151,622	8,879	4,056	12,935	68·6	31·4
1927	11,413	*416	107,018	41,940	148,958	*2,632	*32	*2,664	*98 7	*1·3
1928	11,421	8	105,977	42,621	148,598	*1.041	681	*360	289·1	*.89 1

*Decrease.

Detailed figures as to the number and classes of factories, number and sex of employees, and horse-power of machinery used in the various districts of the State, will be found in the Appendices I to XII.

At the end of November, 1928, there were 6,876 registered factories in the Metropolitan District, employing 120,642 persons, a decrease of 1 factory and an increase of 711 persons, compared with the figures at the end of the previous year. Of this increase, males represented a decrease of 155, or 21·8 per cent., and females an increase of 866, or 121·8 per cent., 991, or 139·5 per cent., and 582, or 39·5 per cent., being respectively a decrease of males and an increase of females over the age of 21 years. Of the total persons employed, males represented 80,241, and females 40,401, or 66·5 and 33·5 per cent. respectively. Only 8,518, or 7 per cent., were under 16 years of age; 14,375, or 11·9 per cent., were between 16 and 18 years; 18,303, or 15·2 per cent., were between 18 and 21 years; and the remainder, 79,446, or 65·9 per cent., were over 21 years of age.

Of the total males employed, 3,398, or 4·2 per cent., were under 16 years of age; 7,149, or 8·9 per cent., between 16 and 18 years; 9,553, or 11·9 per cent., between the ages of 18 and 21 years; and the remainder, 60,141, or 75 per cent., were over 21 years of age.

Of the total females employed, 5,120, or 12·7 per cent., were under 16 years of age; 7,226, or 17·9 per cent., between 16 and 18 years; 8,750, or 21·6 per cent., between the ages of 18 and 21 years; and the remainder, 19,305, or 47·8 per cent., were over 21 years of age.

It is satisfactory to report that out of a total employment in the Metropolitan District of 120,642 only 8,518, or 7 per cent., were under 16 years of age. A comparison of the figures of each sex under and over 21 years of age is somewhat interesting, inasmuch as it demonstrates that, whereas the difference between the number of females of these ages is slight, the excess of males over 21 years of age is large. There were more females than males under 21 years of age employed in the factories in the Metropolitan District, but the males over 21 years of age exceeded the number of females over that age in the proportion of more than 3 to 1.

During the period of 1912 to 1914 the percentages of boys and girls under 16 years of age remained about the same; for the period 1914 to 1927 the percentage slightly increased, whilst for the year 1928 there was a slight decrease, as the following table will show :—

Percentage distribution of persons under 16 years of age.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1912	2·3	2·9	5·2	1921	2·6	3·6	6·2
1913	2·2	2·8	5·1	1922	2·6	3·8	6·4
1914	2·3	2·9	5·2	1923	2·7	3·8	6·5
1915	2·8	3·1	5·9	1924	2 8	3·7	6·5
1916	2·6	3·3	5·9	1925	2·7	3·8	6·5
1917	2·5	3·4	5·9	1926	3·0	3·9	6·9
1918	2·4	3·3	5·7	1927	2·9	4·1	7 0
1919	2·6	3·4	6·0	1928	2·7	3·6	6·3
1920	2·5	3·4	5·9				

Taking the males and females under 16 years of age collectively, there was a slight decrease during 1913 over the previous year, but from 1914 to 1927 the percentage gradually increased, equalling in 1915, 1916, and 1917 that for 1920, as the table indicates. The percentage for 1918 was slightly below that for the three previous years, being 5·7 as against 5·9, but for 1923, 1924, and 1925 it was higher than for any year since 1909, when it was 6·8. The percentage for 1927 is the highest on record. For the year 1928 there was a slight decrease over the previous year.

The industry class employing the greatest number of persons in 1928 was clothing and textile fabrics with 32,219, followed by metal works, machinery, &c., with 20,087, and food and drink, &c., with 16,352; these three classes accounting for 68,658 out of a total of 120,642 employed in all classes of factories in the Metropolitan District.

Minor wares increased by 1,517; metal works, 527; vehicles, &c., 338; heat, light and power, 313; and woodworking, 316, as compared with 1927. The noticeable decreases in employment were in treating raw materials, 581; ship and boat building, 509; furniture 454; food and drink, 406; and printing, 285.

The following statement will show the increase or decrease in persons, males and females, from 1915 to 1928, inclusive :—

Year.	Persons employed.			Increase over previous year.			Percentage of total increase.	
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Female
1915	54,891	26,438	81,329	.....	.....	.....	.....	.....
1916	47,378	26,649	74,027	*7,513	211	*7,302	*102·9	2·9
1917	48,927	27,223	76,150	1,549	574	2,123	72·9	27·1
1918	55,355	29,145	84,500	6,428	1,922	8,350	77·0	23·0
1919	62,030	30,309	92,339	6,675	1,164	7,839	85·2	14·8
1920	68,583	31,270	99,853	6,553	961	7,514	87·2	12·8
1921	63,850	31,309	95,159	*4,733	39	*4,694	*100·8	·8
1922	66,888	33,802	100,690	3,038	2,493	5 531	55·0	45·0
1923	70,022	33,334	103,356	3.134	*468	2,666	117·5	*17·5
1224	71,642	34,131	105,773	1,620	797	2,417	67·0	33·0
1925	74,096	35,728	109,824	2,454	1,597	4,051	60·5	39·5
1926	82,518	39,465	121,893	8 422	3,737	12,159	69·3	30·7
1927	80,396	39,535	119,931	*2,122	70	*2,052	*103·4	3·4
1928	80,241	40,401	120,642	*155	866	711	*21·3	121·8

* Decrease.

The following table shows the increase or decrease in number of factories and persons employed therein during the same period :—

Year.	Number of factories.	Increase over previous year.	Persons employed.	Increase over previous year.
1915	4,758	.....	81,329	.....
1916	4,814	56	74,027	*7,302
1917	4,799	*15	76,150	2,123
1918	4,942	143	84,500	8,350
1919	5,330	388	92,339	7,839
1920	5,842	512	99,853	7,514
1921	5,934	92	95,159	*4,694
1922	6,367	433	100,690	5,531
1923	6,573	206	103,356	2,666
1924	6,868	295	105,773	2,417
1925	6,947	79	109,824	4,051
1926	6 837	*110	121,983	12,159
1927	6,877	40	119,931	*2,052
1928	6,876	*1	120,642	711

* Decrease.

Total increase—2,118 factories, 39,313 persons.

As at 30th November, 1928, 1,185 registered factories in the Newcastle District employed 12,082 persons, of whom 11,017, or 91·2 per cent., were males, and 1,065, or 8·8 per cent., were females. 56·5 per cent. of the females employed in the Newcastle District and 18·2 per cent. of the males were under 21 years of age. The large percentage of adult male employment was due to a great extent to the number employed at the steel and iron works of the Broken Hill Proprietary Company, Limited, at Port Waratah, Rylands Bros. (Aust.) Limited, Vickers' Commonwealth Steel Products, Limited, and Lysaghts', Limited; aggregating 4,765, or nearly 52·8 per cent. of the total number of males over 21 years of age.

In the remainder of the State, there were on 30th November, 1928, on the records of the Department, 3,360 registered factories, employing 15,874 persons; of whom 14,719, or 92·7 per cent., were males, and 1,155, or 7·3 per cent., females. This was a decrease of 29 factories and a decrease of 498 persons, as compared with 1927.

Horse-power of Machinery.

At the end of the year 1928, 9,861 factories throughout the State were using machinery equal to 415,209 horse-power.

Child Labour in Factories.

One hundred and fifty-six children under 14 years of age (89 boys and 67 girls) were granted the special permission of the Minister to engage in factory employment. Eight thousand six hundred and five children were certified as physically fit for employment in certain classes of factories.

Following is a table showing the distribution of the foregoing permits and certificates in the districts in which the State is divided for departmental purposes :—

District.	Permits granted.			Certificates of Fitness.	
	Special (to children between 13 and 14 years of age).			Issued.	Declined.
	Males.	Females.	Total.		
Metropolitan	89	67	156	8,102	.....
Newcastle	.....	.....	.....	332	.....
Broken Hill	.....	.....	.....	5	.....
Rest of State	.....	.....	.....	166	.....
Total	89	67	156	8,605	.....

By way of comparison, the numbers of special permits granted during the last ten years are shown hereunder, and the allocation of the children who were granted certificates into the various industries is shown in Appendix X.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1918	134	31	165	1924	160	58	218
1919	200	37	237	1925	173	64	237
1920	142	38	180	1926	118	69	187
1921	125	44	169	1927	92	51	143
1922	116	61	177	1928	89	67	156
1923	152	74	226				

New Industries.

A large company with headquarters in Sydney commenced the manufacture of certain electrical appliances not previously manufactured in this State. Sixteen acres of land had been acquired near Newcastle, of which four were utilised for the erection of a steel structure, measuring 220 feet by 110 feet. The walls are of iron, the floor cement concrete, and the building, being well ventilated, is distinctly modern.

The new articles manufactured include :—New style traction motors, electric irons and toasters, and certain street light fittings. Other manufactures include traction controllers and certain parts of control equipment, squirrel cage motors and Star Delta starters, and air-brake switches to control 6,600 and 33,000 volts. The operations embrace the engineering, sheet metal, wood-working, electro-plating, and polishing trades. About 180 persons are employed, of whom 35 are females, mostly engaged in winding work.

A noticeable feature of the plant is the complete lighting system for night work when necessary. Reflectors containing 1,000 watt lamps, spaced 40 feet apart, are suspended from the roof in the centre of the main bay; while other reflectors, angle type, with 500 watt lamps, spaced 20 feet apart, are placed on the side walls. The fittings are arranged so that they may be easily disconnected from the supply, taken down and cleaned on the ground, thus ensuring thorough cleansing and eliminating risk to the cleaner. In the side bays Cooper Hewitt mercury vapour 450 watt lamps, spaced 20 feet apart, have been installed.

The company has full orders, and extensive additions to buildings and plant with corresponding increase in staff are contemplated in the near future.

A completely new industry, small at present, but with encouraging prospects, was established in the Metropolis. From a mineral product known as "synthetic resin" articles of domestic ware are now being produced in large quantities. It is claimed that the basic elements of the material used are all antiseptic, and that the manufactured articles are unbreakable, with ordinary usage, and are non-conductors of heat. The elements are placed in moulds and subjected to heat and pressure, then cleaned and polished on buffing wheels and subjected to great oven heat. Hand polishing then follows to increase the lustre. At the present time three floors of a building are used for the various processes, and about 40 persons are employed.

Tassels, cords, braids, and fringes used for motor trimmings are now made locally. The fringes and braids are made on a crocheting machine, and several patterns can be produced simultaneously. Certain patterns are made upon hand looms, and a rope walk and mechanical twisting plant are also operated. The product is finding a ready market, and there is every prospect of extension.

Overtime in Factories.

During 1928 the Minister granted applications for extensions of overtime in respect of 31 factories, affecting 7 male and 466 female employees. Similar permission was granted during the previous year in respect of 60 factories, involving 130 male and 1,040 female employees, and the figures for 1926 were 85 factories, and 2 males and 866 females.

The following table sets out the classes of factory in which the additional overtime was worked :—

Class of Factory.	Factories.	Employees.		Total.
		Male.	Female.	
Class VI—				
Confectionery	4	.....	34	34
Class VII—				
Clothing	1	.....	2	2
Spinning	3	5	69	74
Dressmaking and Millinery	4	.....	66	66
Underwear	1	.....	14	14
Hosiery	3	.....	146	146
	12	5	297	302
Class VIII—				
Printing	11	2	105	107
Class XVI—				
Jewellery	1	.....	5	5
Class XIX—				
Brushes	2	.....	4	4
Laundries	1	.....	21	21
	3	.....	25	25
Total	31	7	466	473

Fencing and Guarding of Machinery.

There is no doubt that the work of factory inspectors is becoming definitely reflected in the methods now generally adopted in the fencing and guarding of machinery. The steady advance in standards during the past several years was satisfactorily maintained during the year under review. This condition is complimentary to the influence of inspection as, unfortunately, owing to the depletion of staff, the number of visits by inspectors in the Metropolitan area was less than usual.

It must be admitted that the occupiers' liability to compensate for injury has aided in this desirable condition, but it cannot be contested that regular visits by the inspectors provide the major reason. It may, indeed, be safely stated that, in general, the methods and conditions of the fencing and guarding in any factory are in certain relation to the number of visits paid by the inspector.

The practice of consulting the Department in these matters is becoming more general, and the requests for advice are increasing in number. Unfortunately, the human factor of inattention, and, in some cases, of contempt, is still in evidence, and reports of accidents still disclose that the guards provided are not always used.

The record of accidents for the year emphasises that again the majority happened at circular saws and moulders, hand planers and power presses, for all of which efficient guards, approved by the Department, and placed on view, in model, in its Museum, can be obtained, and there is usually no difficulty in getting the occupier to recognise his liability under the Act to provide same at his machines.

The guards being provided, the next requirement is their constant use. This demands not only proper supervision by the occupier or his foreman but satisfactory co-operation on the part of the machinist. This co-operation is vital, but not always rendered, and a serious injury often results.

It would seem that in many cases other steps are necessary. For example, goggles are provided by occupiers for the use of men working at abrasive wheels. When discovered working at the wheels without the protective glasses the reason given is that there is objection to using goggles also used by other employees. In answer to this, it may be stated that at a large works where individual goggles were supplied their use was so limited that the management had protective eye-shields firmly attached to the guards over the wheel, with satisfactory reduction in eye accidents.

It is admitted that guards cannot be affixed permanently to circular moulders or power presses owing to the changing forms of work, but the unhappy record of accidents at these machines undoubtedly discloses that much more stringency is required in their efficient and constant guarding. Towards this end the operative can and should contribute his share, for it is his immediate welfare which the Act and the inspectors seek to protect.

The establishment of safety-first committees, as previously urged, would, it is considered, amend this neglect, as with these committees comprised wholly or mainly of employees those inclined to carelessness would soon be brought to book.

The exhibition of safety-first posters and other warning signs is again recommended as providing constant reminders of possible danger.

Following is an analysis of the reported accidents, and the extent of injuries:—

Extent of Injury.	Accidents Reported.				
	District.				Total.
	Metro-politan.	Newcastle.	Broken Hill.	Rest of State.	
Fatal	7	1	...	3	11
Permanent Injury—					
Loss of arms	2	...	...	...	2
,, hands	1	...	...	1	2
,, fingers or parts	81	13	...	7	101
,, eye	2	...	...	1	3
,, legs	2	...	...	...	2
Temporary Injury—	88	13	...	9	110
Gas poisoning	...	1	...	...	1
Burns, scalds, &c.	112	104	...	16	232
Cuts, lacerations, bruises—					
On hands	1,250	282	...	61	1,593
,, arms	239	80	...	11	330
,, body	313	83	...	20	416
,, feet	359	149	...	32	540
,, head	203	90	...	13	306
Other	7	8	...	2	17
	187	77	...	17	281
	2,670	874	...	172	3,716
Total	2,765	888	...	184	3,837

The following statement gives the distribution of accidents as due to machinery or other causes. Appendix XI contains details of machinery at which accidents happened.

Causes of Accident.

Machinery—

Metal working	337	Paper, printing	104
Woodworking	177	Leather	24
Stone, clay, &c.	10	Rubber	45
Food and drink	84	Laundry	5
Clothing, &c.	58	Other	31

Miscellaneous—

Mill gearing	43
Elevators, conveyors, &c.	11
*Accidents under Section 38*d*	2,732

Other Causes.

Dangerous substances—		Electricity	9
Steam	7	Chemicals	7
Hot substances—		Gas	4
Water	15	Other	2
Metal	89		
Other	43	Total	3,837

* These accidents occurred through causes not specified above, but so disabling the injured person as to prevent him from returning to his work in the factory within seven days.

Fatal Accidents.

During the year, eleven persons lost their lives as the result of accidents in factories. Of these, seven were occasioned by mechanical, and four by non-mechanical means. They are briefly described hereunder:—

An engineer's assistant, while proceeding to effect some repairs to a standing overhead crane, failed to notice another crane moving on the same runway, which crushed him against a column of the building. The resulting injuries were so serious that death ensued shortly afterwards.

A sawyer was feeding a piece of timber, 6 feet long, to a circular saw when it became caught upon the saw and being driven back struck him with great force on the chest and killed him.

In a brickworks, a man was oiling the crown wheel of a grinding pan, then at rest. The machinery was started, apparently without warning, and his arm becoming caught in the revolving wheel he was so severely injured that death resulted.

A workman was engaged moving a girder, by hoist, to a place alongside a fixed girder when the hook became disengaged and he was crushed to death between both girders.

In a sawmill, the sawdust attendant, whilst replacing the blower-belt, had his arm caught between the revolving pulley and the belt, and was almost instantaneously killed.

A somewhat similar fatality occurred at an ice works. An employee was engaged oiling a bearing on a line of shafting when his clothing became caught between the pulley and belt and he was whirled to death.

A large emery wheel burst in a foundry and portion, carrying away the guard, struck an operative and felled him. In his fall his head struck a large casting, and the dual injuries were so severe that he succumbed a few days later.

In a large sheet-metal works an employee fell a distance of 18 feet from a ladder to a concrete floor and died almost immediately.

A young man attending a calendar in a paper mill endeavoured to remove some waste paper from under the rolls, when his arm was drawn between the rolls, and he was so badly crushed that death ensued shortly afterwards.

At a paint works, an overhead crane-driver was oiling part of the gear when he fell 28 feet and received such serious injuries that he died two days later.

An employee at a large motor engineering works was removing anti-corrosive compound from motor parts with a mixture of benzine and kerosene; evidently a quantity of the mixture was spilt upon his clothing, as during the lunch hour when he struck a match to light a cigarette he became enveloped in flames and the severe burns occasioned his death.

Means of Escape in Case of Fire.

The passage of another year allows it to be said that the amendment of the fire escape section of the Act has been fully justified.

The provision requiring occupiers to furnish plans of proposed alternative means of escape, and to maintain the same when erected, has been well observed. In result better and safer types of escapes have been provided and the condition of existing escapes has improved.

Close attention was given during the year to ensure that all directions to escapes were clearly marked; all doors leading to same were kept, during working hours, unlocked and unbolted; and that all means of access to these safety routes were kept clear of any obstruction. In a few instances occupiers were inclined to allow accumulations of old cases and other impedimenta to remain on the escape landings and in the passages leading thereto, but these breaches were soon remedied, and the regulations, generally, were well observed.

The constantly recurring problem of transforming existing approved escapes in buildings, either heightened or altered in some other structural manner, was owing to the great building activity obtaining always in evidence, and many difficult situations had to be overcome.

Following Departmental practice and with the endorsement of the Chief Officer of Fire Brigades internal, balcony and roof escapes to adjoining premises were approved in preference to external stairways, which, fortunately, are much less in favour with architects than formerly.

The Regulations under the Act covering fire risks were stringently applied during the year, and a large number of visits were paid by the Inspectors in company with the representatives of the Chief Officer of Fire Brigades, who certified that during the period under review forty-three factory premises had been provided with satisfactory alternative means of escape.

Prosecutions.

During the year informations for breaches of the Factories and Shops Act and Regulations were laid in 215 cases.

Following are the details :—

Section.		Convictions.	Dismissals.	Withdrawals.	Total.
6 (15)	Failing to pay registration fee	26	.....	96*	122
7	Being in occupation of unregistered factory	13	.....	3	16
20	Failing to keep premises in a cleanly state	3	.....	.....	3
26	Failing to provide seating accommodation	.....	.....	1†	1
33	Failing to fence dangerous machinery	12	1	1	14
38	Failing to report accidents	3	.....	.....	3
40	Employing child under 14 without special permission	.....	.....	.....	.....
41	Employing boy on prohibited machine	1	.....	.....	1
42	Employing female over 5 hours without meal interval	.....	.....	.....	.....
43	Breaches of overtime provisions	3	.....	.....	3
45	Employing children under 16 without certificates	6	.....	.....	6
46	Employing between 6 p.m. and 6 a.m.	.....	.....	.....	.....
49	Working or permitting work in furniture factories after hours	46	.....	.....	46
68	Failing to pay tea-money	.....	.....	.....	.....
	Total	113	1	101	215

* Summonses were not served in three instances.

† Order made by magistrate.

WALTER I. TAYLOR,
Chief Inspector of Factories and Investigation Officer.

FACTORIES AND SHOPS ACT, 1912.

SECTION 62.

BOILER REGULATIONS.

Annual Report.—Period January–December, 1928.

The Departmental Engineer reports as follows :—

Accredited Inspectors.

Applications Made and Certificates Granted.—During the year twenty-three (23) made applications for the Minister's Certificate of Approval to inspect boilers and other pressure vessels installed in factories, fourteen (14) being granted and certificates issued. At the end of the period under review there were 169 active accredited inspectors, as per list attached.

Certificates Cancelled.—In pursuance of the Boiler Regulations, the Minister ordered the following certificates to be withdrawn and cancelled :—

Certificate No.	*Date of Issue.*	*To whom Issued.*	*Date of Cancellation.*
91	27–3–1917	Charles H. Ausburn	31–7–1928
81	12–3–1917	Thomas Laing	29–10–1928

Boiler Inspection.

Reports in connection with the inspection of boilers and other pressure vessels numbering 8,136 were lodged by accredited inspectors as follows :—

	Reports received.		
	Boilers.	Other Pressure Vessels.	Total.
Prescribed Reports:—			
First Inspections	416	784	1,200
Re-inspections	2,773	3,529	6,302
Total	3,189	4,313	7,502
Non-prescribed Reports:—			
Internal	634	.....	634
Grand Total	3,823	4,313	8,136

During the year, 416 boilers and 784 other pressure vessels were newly installed and 87 boilers and 151 other pressure vessels were reported as being either discarded or out of commission. The number of the various types of boilers and other pressure vessels inspected is given in the following table :—

	First Inspection.	Re-Inspection.	Total.	Discarded.	Newly Installed.	Explosions.
Boilers—						
Cast-iron Sectional	16	49	65	2	16	...
Colonial	100	725	825	17	100	...
Cornish	8	96	104	5	8	...
Egg-ended	...	4	4	...	...	...
Jackass	4	21	25	...	4	...
Lancashire	7	84	91	3	7	...
Locomotive, including Portable Traction, and Road Rollers.	74	443	517	12	74	...
Marine Wetback	1	2	3	...	1	...
Marine Dryback	6	48	54	4	6	...
Multitubular	14	230	244	7	14	...
Vertical	153	647	800	32	153	1
Watertubes	26	410	436	4	26	...
Wolff	3	...	3	...	3	...
Other Steam Generators	4	14	8	1	4	...
Total	416	2,773	3,189	87	416	1

Types of Boilers and other Pressure Vessels Inspected, &c.—*continued.*

	First Inspection.	Re-Inspection.	Total.	Discarded.	Newly Installed.	Explosions.
Other Pressure Vessels—						
Air and Water Receivers	333	760	1,093	32	333	...
Autoclave Presses	8	30	38	1	8	...
Calendars, including Mangles	16	141	157	5	16	...
CO_2 Cylinders and Purifiers	6	125	131	5	6	...
Coolers	...	30	30	...	...	...
Copper Coils and Pipe Heaters	12	74	86	3	12	...
Cylinders, Drying Drums and Boilers (Steam Heated).	27	340	367	2	27	...
Desiccators	1	3	4	1	1	...
Digestors	13	92	105	9	13	...
Economisers	...	10	10	...	...	...
Hot Tables—Presses, Drying Tables, Cantilever Presses, Patching Tables.	41	237	278	6	41	...
Jacketed Vessels	86	852	938	24	86	...
Monteju and Crystalizers	12	23	35	1	12	...
Oil Receivers	1	...	1	2	1	...
Retorts	8	54	62	...	8	...
Steam-heated Rolls	...	...	...	...	...	...
Steam-heated Vessels	27	246	273	9	27	...
Steam Separators	2	7	9	...	2	...
Sterilizers	...	8	8	...	...	...
Stills	2	20	22	...	2	...
Stout and Wine Butts	...	57	57	...	...	...
Sugar Drivers	...	...	...	...	...	...
Superheaters	1	2	3	...	1	...
Vacuum Vessels	4	15	19	...	4	...
Vegetable Steamers	...	...	...	...	...	...
Vulcanizers	184	403	587	51	184	...
Total	784	3,529	4,313	151	784	...
Grand Total	1,200	6,302	7,502	238	1,200	1

Notices Served upon Factory Occupiers.

Notices numbering 157 were served upon factory occupiers to ensure compliance with the requirements of the Boiler Regulations, as per the following summary :—

	Boilers.	Other Pressure Vessels.	Total.
Blow-off Cocks	1	.....	1
Casing in Lever Safety Valves	1	.....	1
Cocks between Check-valve and Boiler	.....	.....	.....
Direct spring Loaded Safety Valves	5	6	11
Feed Pumps	.....	2	2
Fusible Plugs	6	.....	6
Injectors	.....	.....	.....
Isolating Valves	.....	.....	.....
Pressure Gauges	9	8	17
Reducing Valves	.....	5	5
Safety Valves to be Locked	8	3	11
Test Cocks	4	.....	4
Valves on Steam Connections	.....	.....	.....
Water Gauges	4	.....	4
Water Gauge-glass Protecters	3	1	4
Unclassified	66	25	91
Total	107	50	157

Explosions.

There were two explosions reported and investigated during the year, as follows :—

A vertical tubular boiler, situated in a suburban bakehouse, exploded, severely scalding one man, who was later admitted to hospital in a serious condition, and slightly injuring another.

The shell of the boiler fractured its full length in the vicinity of the longitudinal seam. The force of the explosion hurled the boiler 18 feet from its setting, and wrecked the wall and roof of the bakehouse.

The Departmental opinion is that the explosion was caused through wastage of the shell plate on the outside. In the vicinity of the longitudinal seam, the thickness in places being reduced from $\frac{3}{16}$ inch to $\frac{1}{32}$ inch.

The boiler was inspected by an accredited Inspector, who certified to a pressure of 50 lb. per square inch. There is no evidence to show that the boiler, at the time of the explosion, was working at a higher pressure than that certified.

A portable boiler used for pumping water for irrigation purposes and situated at Stony Crossing exploded on the 25th September, 1928, causing the death of two persons.

The boiler did not come within the ambit of the Boiler Regulations under the Factories and Shops Act, and the cause of the explosion was not investigated by a Departmental officer.

The police report upon the explosion does not indicate the cause.

Factories and Shops Act, 1912—*Regulations for the Inspection of Steam Boilers, &c.*

ACCREDITED INSPECTORS.—31ST DECEMBER, 1928.

In accordance with the provisions of clause 5 of the Regulations of the 10th March, 1916, made under section 62 of the Factories and Shops Act (published in *Industrial Gazette*, vol. 9, p. 815), the Minister has approved that the persons whose names appear hereunder may make inspections and carry out all other necessary duties pertaining to the application of such Regulations.

The names appear in groups, comprising persons resident in Sydney and Suburbs, Newcastle and district, and country centres, respectively.

Cert. No.	Name.	Address.
	Sydney and Suburbs.	
190	Adamson, D. J. ...	21 Dartbrook-road, Auburn.
75	Allen, J. A.	"Dokotoh," Cheltenham and Beecroft roads, Cheltenham.
182	Allum, S. C.	54 Charlotte-street, Ashfield.
131	Archer, C. S.	Chaleyer-street, Rose Bay.
4	Banyard, T. R.	c/o L. Hinks & Co., Ltd., Engineers. 2 O'Connell-street, Sydney.
204	Barron, W. N.	"Narani," President-avenue, Brighton-le-Sands.
217	Bell, A. C.	6 Wood-street, Ashfield.
172	Bennett, G. T.	"Penryn," Sutherland-crescent, Darling Point.
17	Bernard, T.....	17 Lenore-street, Five Dock.
9	Berry, J. H.	c/o Royal Insurance Co., corner Spring and Pitt streets, Sydney.
221	Booth, H. C.	5 Dudley-street, Haberfield.
254	Boyd, H. I.	5 Gataere-avenue, Lane Cove.
166	Brighton, E. J. B.....	77 Glenmore-road, Paddington.
233	Butler, N.	Pittwater-road, Gladesville.
213	Campbell, A.	Russell-avenue, Lindfield.
105	Campbell, A. N. ...	c/o Tooth & Co., Ltd., George-street West, Sydney.
181	Chapman, F. J.	37 Dolphin-street, Randwick.
62	Chapman, G.	26 Clara-street, Erskineville.
109	Christie, J.	Woodburn-road, Lidcombe.
76	Clarkson, E. J.	"The Hut," Seaview-street, Balgowlah.
161	Coleman, J. H.	32 Paisley-road, Croydon.
21	Connie, P.	275 Henderson-road, Alexandria.
189	Connie, W. F.....	275 Henderson-road, Alexandria.
236	Croueh, E. E.	20 Napier-street, North Strathfield.
224	Danks, J. R. W. ...	"Rawhiti," 9 Keir-avenue, Hurlstone Park.
216	Darbon, W. A.	8 Young-street, Sydney.
212	Davies, A. J.	11 Foucart-street, Rozelle.
28	Davis, C. E.	50 The Avenue, Granville.
180	Davis, H. C.	29 Hayden-street, Mosman.
252	De Jaunay, H.	"Cardon," Lawn-avenue, Lane Cove.
230	Dempster, G.	24A Forsyth-street, Willoughby.
153	Denovan, C.	89 Lyons-road, Drummoyne.
199	Dobson, A. J.	12 Tenilbra-road, Northbridge.
218	Donaldson, D. A. ...	20 West-street, Five Dock.
240	Donaldson, W. J. ...	6 Slade-street, Crow's Nest.
211	Donnelley, N. S. ...	42 Dening-street, Drummoyne.
92	Duncan, J.	Queensland Insurance Co., Sydney.
248	Dunnett, G. S.	"Wandeen," Huntley's Point.
53	Elder, Wm.....	6 Dalley-street, Sydney.
186	Fairclough, C. S. ...	63 Booth-street, Balmain.
202	Ferguson, W. J. ...	12 Glover-street, Paddington.
19	Fielder, J.	N.R.M.A., 30 Grosvenor-st., Sydney.
206	Fogarty, J.	90 Ben Boyd road, Neutral Bay.
226	Fowler, C. E.	"Palmiston," Carnarvon-st., Auburn.
50	Fraser, H.	"St. Kilda," 10 Allister-st., Cremorne
222	Frye, F. T.	41 Chaleyer-street, Rose Bay.
49	Fox, F. C.	351 Kent-street, Sydney.
219	Garrow, P. M.	"Rosslyn," Alice-street, Lakemba.
223	Gleeson, Michael ...	496 Darling-street, Balmain.
2	Gregory, R.	Walton-crescent, Abbotsford.
124	Hall, S. G.	25 Moore-street, Lilyfield.
31	Hastie, J.	Joseph-street, Ashfield.
52	Hopkins, E. J.	760 Botany-road, Alexandria.
134	Hosking, W. J.	67 Day-street, Sydney.
235	Hughes, C. S.	"Taikoo," Warrigal-street, Turramurra.
29	Hunter, A. H.	Woolwich-road, Hunter's Hill.
205	Kennedy, J. M.	56 Kellett-street, Darlinghurst.
227	Keogh, R. J.	53 Green's-road, Paddington.
228	Kirkealdie, W. K.	"Yallanbee," Greenwich-road, Greenwich.
93	Kirkwood, D.	18 Leopold-street, Croydon.
154	Lawson, D.	30 Thompson-street, Mosman.
1	Lawson, J.	Queensland Insurance Co., Pitt-street, Sydney.
187	Lewis, A.....	"Maesbury," Cook-road, Lindfield.
232	Lyall, F.	"Sorrento," Abbotsford-road, Abbotsford.
191	Martin, A. E.	"Bretley," Kerr's-road, and Tilba-street, Lidcombe.
22	Mason, H. D.	25A Pitt-street, Sydney.
7	Massey, G.	Post Office Chambers, Pitt-street, Sydney.
250	McCadams, Rob't W.	Tressider-avenue, Haberfield.
36	McDonald, T. W. ...	"Durham," Rosebery-street, Mosman.
242	McLachlan, A.	3 Cabban-street, Mosman.
5	McLardy, J. R.	Broderick-street, Balmain.
94	McRoberts, H. A. ...	Queensland Insurance Co., Pitt-street, Sydney.
51	McSwiney, J.	Union Assurance Co., 14 O'Connell-street, Sydney.
44	Mitchell, D.	11 Joseph-street, Lidcombe.
10	Mitchell, S. M.	Mercantile Mutual Insurance Co., 14 Martin-place, Sydney.
77	Morrison, A.	Pearson-street, Balmain.
132	Nairn, A. C.	"Shanklin," 38 Knox-street, Clovelly.
174	Nicholls, W.	c/o R. Wildridge & Co., 76 Pitt-street, Sydney.
12	Nicoll, G.	24 The Crescent, Homebush.
68	Oliver, R. K.	48 Warrane-road, Willoughby.
115	Orchard, A. E.	"Harbour View," 2 Lookes-avenue, Balmain East.
225	Pain, E. O.	129 Livingstone-road, Marrickville.
188	Pearson, E. W.	60 Premier-street, Marrickville.
67	Rawson, C.	32 Jamieson-street, Sydney.
121	Reeks, R. W.	12 Renwick-street, Drummoyne.
234	Reid, J.	15 Shakel-avenue, Concord.
162	Reynolds, L. J.	82 Pitt-street, Sydney.
229	Richards, R. D. ...	780 Military-road, Mosman.
42	Rodgers, S. D.	"Dalmeny," 17 York-road, Centennial Park.
255	Rossell, A. H.	18 Courallie-avenue, Flemington.
175	Russell, R.	The Avenue, Granville.
45	Savage, J.	36 Tweedmouth-avenue, Rosebery.
30	Scott, J. J.	10 Alma-street, North Sydney.
253	Scott, R. W.	10 Alice-street, Auburn.
156	Scott, W.	8 Tyneside-avenue, Willoughby.
249	Sealy, W. B.	69 Ashley-street, Chatswood.
150	Shaw, T. E.	Box 1649, G.P.O., Sydney.
85	Sinclair, J.	19 Ballast Point road, Balmain.
132	Sinclair, W.....	97 Pitt-street, Sydney.
209	Smeal, K. H.	8 Hazelbank-road, Wollstonecraft.
220	Smiles, W.	7 Iredale-avenue, Cremorne.
171	Smith, H. D.	"Malua," Fisher's-avenue, Vaucluse.
89	Smith, J. M.	Peacock Point, Balmain.
208A	Smith, W. H.	"Carinya," Burns-crescent, Chiswick.
111–241	Stephenson, W. F....	2 Hunter-street, Sydney.
128	Stevenson, G.	Point-road, Northwood.
58	Stobo, S. E.	Morce-street, Gordon.
88	Stowe, F. E.	54 Young-street, Sydney.
118	Stronach, J.	Ewenton-street, Balmain.
15	Tate, A. S. W.	Kelsyn Flats, Beetha-road, Neutral Bay.
210	Taylor, C.	"Bangor," Raven-street, Gladesville.
239	Teape, C. J. P.	"Ellerslie," Hay-street, Croydon.
66	Thomson, J. Sted.	33 Macquarie-place, Sydney.
13	Totolos, A.	35A Rangers-road, Cremorne.
16	Treffone, D.	50 Holmwood-street, Newtown.
207	Turner, C.	"Wirringilla," Susan-st., Randwick.
46	Vyle, C.	14 Jones-street, Pyrmont.
231	Walker, W. A.	11 Fanning-street, Temple.
238	Wallace, J. D.	29 Cabarita-road, Cabarita.
178	Weeks, T. E.	"Avergue," Parramatta-road, Haberfield.
160	Wildridge, A. H. ...	76 Pitt-street, Sydney.
14	Wildridge, R.	76 Pitt-street, Sydney.
83	Williams, A.	29 Tressider-avenue, Haberfield.

ACCREDITED INSPECTORS—*continued.*

Cert. No.	Name.	Address.	Cert. No.	Name.	Address.
		Newcastle and District.			
117	Cameron, T.	11 Rowan-street, Merewether.	127	McIntyre, J. P.	Robert-street, Mayfield.
100	Clegg, W. E.	cr. Lorna and Bridge sts., Waratah.	87	Morrison, D. N.	c/o Morison and Bearby Ltd., Carrington.
158	Craig, H.	23 Janet-street, Merewether.	11	Rodgers, J. E.	Church-street West, Newcastle.
125	Dalby, G. W.	47 Mitchell-street, Stockton.	237	Rodgers, R. N.	Church-street West, Newcastle.
56	Dick, Jas.	20 Fitzroy-street, Mayfield.	73	Taylor, A.	19 Hudson-street, Hamilton, Newcastle.
74	Dick, Wm.	Fern-street, Islington.			
104	Ellis, R. G.	Kerr-street, Mayfield.			
200	Gray, T. G.	"The Billows," Carlisle-st. Stockton.			
		Country Districts.			
		North.			South.
98	Ratcliffe, J. R.	Rouchel-road, Aberdeen.	79	Hargreaves, R. S.	"Keira," Cootamundra.
198	Wearne, Wm.	Emmaville.	33	Coutts, H. K.	Town Hall, Goulburn.
119	Brazenall, E.	Hillgrove.	70	Stevens, E. R.	Pumping Station, Tenandra, Gundagai, Junee, Wagga.
168	Gaukroger, F.	Tingha.			
		North Coast.			South Coast.
102	Wood, E. H.	Crane-street, Ballina.	82	Harrison, G.	Kinghorn-street, Nowra.
...	Bates, H. D.	Blackalls-avenue, Blackalls, Lake Macquarie.	140	Noble, J.	Kinghorn-street, Nowra.
78	Issacs, A. R.	c/o Colonial Sugar Refining Co., Ltd., Broadwater, Richmond River.	35	Jones, S. C.	c/o Electrolytic Refining Co., Ltd., Port Kembla.
244	Johnston, W.	Dredge "Forster," Cape Hawke.	197	Clark, J. C. B.	Stanley-street, Wollongong.
71	Smith, E. W.	Coff's Harbour Jetty.	103	Sharp, J. W.	cr. Ocean and Edward streets, Wollongong.
59	Mathews, T. B.	c/o Colonial Sugar Refining Co., Ltd., Condong, Tweed River.			
					West.
114	Frewin, F. A.	31 Prince street, Grafton.	164	Giffin, J.	Proprietary Mine, Broken Hill.
245	Cassels, R.	Harwood, Clarence River.	169	McAskill, A. W.	Junction Mine, Broken Hill.
184	Wilson, J. A.	Harwood, Clarence River.	201	Reece, T. A.	Electric Light Works, Broken Hill.
152	Cliff, R. C.	c/o Kempsey Electric Light and Power Supply Co., Ltd.	163	Woolcock, H. A.	325 William-street, Broken Hill.
			107	Allibon, H.	Deniliquin.
57	Guthrie, A.	24 Union-street, Lismore.	26	Parker, E.	Hassan's Walls road, Lithgow.
246	McGuinness, P. J.	c/o Royal Hotel, Morpeth.	138	Donovan, D.	Canonbar, via Miowera.
65	Woodley, E. H.	Victoria-street, Taree.	243	Folster, W.	Box 107, P.O., Orange.

The following companies have on their respective staffs persons holding the Minister's certificate of approval to inspect boilers, &c., under the Boiler Inspection Regulations:—

Atlas Assurance Co. Ltd., Sydney.
Australian Alliance Assurance Co., Sydney
Australian Mutual Fire Insurance Society Ltd., Sydney.
British Equitable Assurance Co., Ltd., Sydney.
City Mutual Insurance Co., Ltd., Sydney.
Colonial Mutual Fire Insurance Co. Ltd., Sydney.
Commercial Union Assurance Co., Sydney.
Co-operative Insurance Co. of Australia Ltd., Sydney.
Eagle, Star, and British Dominions Insurance Co., Ltd., Sydney.
Employers' Liability Assurance Corporation Ltd., Sydney
Farmers' and Settlers' Co-op. Insurance Co. of Australia Ltd., Sydney.
Federal Insurance Co , Ltd., Sydney
Insurance Office of Australia Ltd., Sydney
Liverpool and London and Globe Insurance Co., Ltd., Sydney.
London Guarantee and Accident Co., Ltd., Sydney.
London and Lancashire Fire Insurance Co., Ltd., Sydney.
Manufacturers' Mutual Accident Assurance Assn. Ltd., Sydney.
Mercantile Mutual Fire Insurance Co., Ltd., Sydney
New Zealand Insurance Co., Ltd., Sydney.
North British and Mercantile Insurance Co., Ltd., Sydney.
Phoenix Assurance Co., Ltd., Sydney.
Queensland Insurance Co., Sydney.
Royal Exchange Insurance, Sydney.
Royal Insurance Co., Ltd., Sydney.
Southern Insurance Association Ltd., Sydney.
Standard Fire and Marine Insurance Co. of New Zealand Ltd., Sydney.
Sydney Fire Office Ltd., Sydney.
The South British Insurance Co., Ltd., Sydney.
Union Assurance Society Ltd., Sydney.
Union Marine Insurance Co., Ltd., Sydney
United Insurance Co., Ltd. Sydney.

METROPOLITAN DISTRICT.

This district is bounded by a line drawn from the sea through and including Helensburgh, thence westerly just south of and including Menangle to a point just north of Burragorang, thence north-easterly to a point east of Rooty Hill, thence north-westerly to and including Kurrajong Heights, thence north-easterly to a point just west of and including Martinsville, thence easterly just north of Morisset to the sea.

It embraces the whole of the county of Cumberland excepting that portion south of Helensburgh, and includes the southern portion of the county of Northumberland.

It is well served by all forms of modern transport, and covers an area of approximately 2,690 square miles.

There are 6,786 factories registered within this area, which, for administrative purposes, is divided into twelve districts.

Mr. Superintending Inspector Armitage reports:—

The Factories and Shops Act as amended in 1927 provided for the payment of a factory registration fee, thus bringing this State into line, in that regard, with the other States of the Commonwealth.

Possibly because of this belated action, and recognising that it was a tax that could be fairly imposed, there was a satisfactory voluntary compliance. Every assistance was rendered by the inspectors towards the removal of friction and every reasonable step was taken to secure the co-operation of occupiers. Proceedings were instituted only as a last resource.

Additional amendments of the Act entailed considerable increase in the work of the branch and I was engaged for some time upon investigations in dangerous trades. The power given to the Minister to make regulations affecting the safety and health of persons working in dangerous and dusty trades is very wise, and it is anticipated that many new regulations will be gazetted from time to time.

The obligation now placed upon occupiers to report accidents caused by other than mechanical means, &c., as provided in the Principal Act, has increased our work in that sphere to a very great extent. The year's statistics disclose an increase in reports of accidents of more than 200 per cent.

I paid many visits to factories in company with the district inspectors and was able to solve many problems relating to the guarding of machinery and to structural alterations.

Plans of some large factories were submitted for the approval of the Department, and I spent much time in examining same and in advising as to the requirements of the Act.

A noticeable feature of recent progress in the State is the establishment of branch factories with headquarters in other parts of the Empire to take advantage of the preference given in the tariff to Empire goods. This applies to motor-cars, chemicals, foodstuffs, rubber goods, hosiery, &c., and the list is still increasing.

Mr. Superintending Inspector Huntley reports :—

Consequent upon the amendment of the Factories and Shops Act requiring registration fees to be paid and giving the Minister power to make regulations to secure the health or safety of factory employees, wherever, in his opinion, endangered by any manufacture, machinery, process, or any description of manual labour, additional duties were cast upon the inspectorate, which, unfortunately, was smaller in numbers than had obtained for several years.

A great deal of work was entailed in the collection of registration fees, and although factory occupiers were given every reasonable opportunity to meet their obligations, many prosecutions ensued. It is anticipated that with the lapse of reasonable time the exhibited repugnance or inattention towards the innovation will automatically disappear.

During the early part of the year my time was to a large extent occupied in revising regulations framed to control the provision of ambulance chests in factories, and these were duly gazetted. The value of the first-aid attention made possible by these chests has been very generally endorsed and the regulations have been commended. Regulations to control the working conditions of factories in which electrical accumulators are manufactured or repaired were also gazetted later.

Additional regulations in respect to factories in which electrical energy is generated, transformed, distributed or used, and to control the manufacture of carbonate, sulphate, nitrate or acetate of lead, were also prepared for approval, and considerable time was devoted to investigation into lead compounds, and the manufacture of paints, lacquers and colors.

Two inspectors' conferences were held during the year, in June and December, and at both addresses were given by professional men distinguished in scientific spheres. Papers were also read by inspectors upon various subjects agreeable to their work, and interpretations of the Acts administered were recited by the heads or representatives of branches. An interesting feature of these conferences is the " Question " section. Inspectors are invited to submit questions under any of the Acts or concerning any difficulty which presents itself in connection with their daily work. The discussions which follow are wide in their extent, and valuable in their import to the inspectorate.

Owing to the depleted staff it was necessary to place new inspectors much earlier than usual in charge of districts, and this involved alterations of districts and much extra work. Inspectors of ripe experience find consultation necessary almost daily, and it is obvious that officers without the advantage of experience and confronting the same problems must be given a great deal of attention.

Reviewing country tours by inspectors occupied much time, the intent being to have as much ground as possible covered, efficiently, at as low a cost as possible. Main towns were given all possible attention at the expense of small places in the far distances.

Mr. Superintending Inspector Dunleavy reports :—

Most of the Chinese factories are now in a satisfactory condition. There is still a tendency on the part of the occupiers who are in a small way to occupy premises that are not up to the standard, but constant supervision has prevented them from remaining in such premises.

After visiting the whole of the larger rubber factories I submitted a draft set of regulations for discussion by the various interests concerned, with a view to minimising some of the dangers associated with that industry.

Accidents.—A fatal accident occurred in my district during the year. The occupier of an ice-making factory was carrying out some alterations to his plant and, unfortunately, he placed himself between a revolving overhead rusty shafting and a wall, with the result that the bib of his overall got caught. He was whirled round the shafting and received injuries that resulted in his death.

Bakehouses.—A number of occupiers received notices to limewash their premises.

Fencing of Machinery.—Many occupiers were given instructions during the year to securely fence dangerous parts of the machinery.

Boiler Regulations.—I found that the regulations were generally observed.

Mr. Inspector Butler reports :—

In August I was placed in charge of No. 11 District, which includes a city and suburban area.

Guarding and Fencing of Machinery.—In one instance an occupier readily affixed a more efficient guard as it was shown that the men, working under safer conditions, worked faster. In my opinion, it is an absolute necessity that a high standard of guarding should be adhered to.

Structural Alterations.—There was no occasion to order any structural alteration.

Sanitation and Hygiene.—Conditions in regard to sanitation were only fair, and instructions for a general clean up were issued in many instances. In one factory it was found necessary to issue instructions to instal additional suction to carry away trade dust which was having a serious effect upon the employees.

Accidents.—Unfortunately there were three serious accidents in the district during my short time in charge. The most serious occurred to a boy of 14 years of age, who lost the whole of his right hand in a thicknessing machine. The second was a girl who was operating a collapsible tube printing machine. It is the usual custom for two girls to operate these machines, but on this occasion one girl was left to do the work, with the result that when a tube, which is carried on a mandrel on a revolving drum, was over-carried, she made an endeavour to recover it and her hand was drawn in between the mandrel and the printing blanket, which is carried on another cylinder which revolves in the opposite direction. Two fingers of the right hand were amputated. The third accident happened to another boy, 14 years of age, who was employed in a large upholstering shop. He was instructed to operate a teasing machine, which was of the horizontal roller-feed type. He placed a quantity of flock on the platform of the machine and was pushing it towards the rollers with his right hand and at the same time he stooped to pick up some more with his left hand; at this moment his hand was drawn into and through the rollers and was severely lacerated by the knives of the teasing band. The injuries necessitated the amputation of the first joint of all four fingers. A guard had been provided, but it was considered necessary to extend the existing guard to prevent a recurrence of the accident.

General.—In November I was transferred to Broken Hill.

Since taking over I have been engaged mostly in Labour Exchange work and tending advice *re* the various Acts administered by this Department.

Mr. Inspector Durack reports :—

The district under my control for the year 1928 was extended by the addition of Alexandria, Botany and Mascot, and from the 1st February to the end of June I had these suburbs under my supervision. During the course of the year, besides my work under the Factories and Shops Act, I conducted prosecutions under the Industrial Arbitration Act for the female Departmental Inspectors.

Registrations.—A large number of new premises erected during the year were mostly in connection with the motor body building industry. These buildings are of modern type, and in every instance were up to the standard required by the Act and Regulations.

Fencing of Machinery.—Although occupiers generally provide guards for their machines, one cannot but observe when entering a factory that many of these fences and guards have been removed or rendered useless, and when the attention of the occupier is drawn to this condition, he in most cases insists that the safety appliances have been removed by the employee. However, in all such cases, the employer has been warned as to his responsibilities under the Act.

Sanitation.—Orders were given to a number of occupiers to effect alterations and additions to premises, and in some instances employers were instructed to erect new and up-to-date W.C. accommodation. Every effort was made to ensure good and wholesome conditions for those employed.

Accidents.—The number of accidents reported during the year was much in advance of those of last year. I am glad to report, however, that no fatal accident occurred in my district. In fact, with the exception of one case, all accidents were of a minor nature. A shopman employed in the manufacture of smallgoods in the factory of a retail butcher had his fingers caught in a mixing machine, with the result that three had to be amputated. In this case no guard was supplied by the occupier. He was prosecuted by the Department and fined heavily. Subsequently the employee took an action in the Supreme Court against the occupier and was awarded a sum of £500 compensation.

Overtime.—The requirements of the Act and regulations in respect to overtime were fairly well observed by occupiers during the year.

Certificates of Fitness.—It is still necessary to draw occupiers' attention to section 45 of the Act, but on the whole I found that most occupiers insist that intending employees obtain permits before starting work.

Mr. Inspector Hutchinson reports :—

At the beginning of 1928 I was entrusted with supervision of No. 1 District.

Structural Alterations.—With the advent of reinforced concrete construction of buildings a pleasing improvement is noticeable in regard to natural lighting and ventilation.

Sanitation.—I find this phase of the work needs constant supervision. In a fairly large portion of my district the pan system is still in use, and I found occupiers to be somewhat negligent regarding the maintenance of hygienic conditions. In many cases I issued instructions that thorough cleaning and lime-washing must be effected. In a number of smaller factories I have found the practice of allowing rubbish, such as shavings, oily waste, lunch papers, &c., to accumulate over a period. In all cases I gave necessary instructions.

Fencing and Guarding Machinery.—I found the provisions of the Act and regulations fairly well observed. In only a few cases was opposition met with in regard to the use and maintenance of guards. The majority of occupiers readily realise the human aspect and the economical value of protecting their employees from injury. It is also apparent that the makers of modern machines are realising that "safety" in addition to efficiency is essential, as neat and effective guards are now bring embodied as parts of the machines.

Accidents.—No serious accidents occurred in my district during the year.

Fire Escapes.—Particular attention was given to this section of the Act. Visits were made to factory premises, from time to time, in company with the Fire Brigades officer. In some cases it was necessary to issue instruction that alternate means of escape be provided, or that alterations or repairs be effected.

Bakehouses.—Instructions to limewash quite a number of bakehouses were given.

Certificates of Fitness.—I found it necessary in many instances to direct the attention of occupiers to the requirements of the Act in this respect. In all cases the matters were rectified immediately the requirements of section 45 were pointed out.

General.—Generally speaking, I found factory occupiers willing to adopt any suggestion which made for safety or better hygienic conditions for their employees.

Mr. Inspector Middlemiss reports :—

Registrations.—A large number of new registrations were dealt with during the year. Owing to depletion of staff my district was extended.

Hygienic Conditions.—The conditions met with indicated a tendency toward improvement.

Bakehouses.—The newer bakehouses inspected were better built and ventilated, and in many cases the furnaces were designed to be fired from a point outside the bakehouse proper. The use of oil fuel is increasing and should be carefully supervised.

Accidents.—A fatal accident occurred in connection with the use of benzol in a manufacturing process. A hot benzol feed pipe became choked with material, and when the joint of the pipe was disconnected in order to clear it a quantity of hot benzol was allowed to escape in the vicinity of an employee. The inhalation of fumes from this hot benzol was held to be the cause of the employee's death.

Steps were taken to provide drain cocks and valves in positions to prevent the escape of hot benzol in such circumstances as described, and also, more efficient natural ventilation in the workroom.

New types of machines are being used in many industries, and these often require re-design of safeguarding devices. As I have previously stated, I am of opinion that an extension of Departmental publicity methods, by the issue of informative pamphlets would greatly assist inspectorial work in accident prevention.

General.—During the year I was called upon to assist in inspecting and considering conditions relative to the proposed regulations applicable to industries where lead, in some form, is manufactured or used.

Toward the end of the year I was instructed by the Chief Inspector to investigate working conditions in the electrical accumulator manufacturing industry in New South Wales, and to report on the effect of the regulations applicable, and the extent to which they were, or were not, being observed.

Mr. Inspector Nolan reports :—

Structural Alterations.—Where necessary, instructions were issued to have premises constructed in compliance with the provisions of the Act. No difficulty was experienced in having orders carried out.

Sanitation.—A number of orders were issued directing compliance with the Act.

The most troublesome factories regarding sanitation are those situated in large buildings where one set of conveniences is provided for several small occupiers. Definite instructions were issued in these cases.

One occupier who failed to keep the factory in a cleanly state was proceeded against and a conviction secured.

Fencing and Guarding of Machinery.—A small number of dangerous machines were found without guards, and instructions were issued to have approved guards fixed forthwith and maintained. I also discovered several guards removed from the machines, and where such occurred the offenders were warned and instructed to replace the guards at once.

At a large laundry, an old-fashioned hydro-extractor had been in use for many years, and presented difficulties respecting effective guarding. The occupier was furnished with a Departmental design, which was fixed to the machine and has proved highly satisfactory.

At one large factory where a number of dangerous machines are used, a " Safety First " committee, consisting of the factory manager, engineer, and three others make periodic inspections throughout the factory looking for danger points, and if any are discovered immediate steps are taken for their elimination. The result of this policy is that although many dangerous machines are used in the factory accidents are of rare occurrence.

Accidents.—A man working at a spindle moulder bevelling the edge of a wide board held the board in such a way that the little finger of his right hand came in contact with the blades and was amputated. A guard was provided for the machine, but the employee threw it out of action before commencing the job.

At a large printing factory two employees were working on an Armoury press, one feeding and the other lifting the printed sheets from the machine. The lifter hesitated when removing a sheet, the result being that his right hand was caught and its index finger amputated. The machine was fitted with a guard in the form of a metal rod fixed across the top of the flap, where the machine is fed, and the rod rises 9 inches when the press closes. It was considered that the action of the guard would have pushed the operator's hand clear of the press, but notwithstanding its operation and an effort made by the feeder, who noticed the danger and attempted to pull the lifter's hand clear of the danger zone, the accident happened.

A female employed at a laundry had her right hand burnt through putting her hand behind the finger guard and attempting to push a thick woollen sock towards the rollers.

Fire Escapes.—At three factories new outside iron escapes had to be provided, and at several others alterations and repairs to fire escapes, as directed by the Fire Brigades officer, were carried out. Instructions were also issued to several occupiers to keep exits and passageways leading to fire escapes clear of any obstruction.

Bakehouses.—Several new bakehouses were erected during the year, the construction and lay-out of the new premises being satisfactory. The installation of new types of ovens heated by gas, electricity and coke, and the recent use of oil fuel instead of wood in a number of the older bakehouses has brought about a welcome change.

Boiler Inspections.—In factories where boilers and vessels under pressure were installed investigations were made to see that the necessary inspections were made within the required periods and the certificates exhibited.

Mr. Inspector Ogilvie reports :—

Registrations.—A large number of occupiers in my district failed to pay the necessary registration fee and, in most cases, it was found necessary to take proceedings.

Fencing of Machinery.—In the best regulated factories, machines were found without the necessary guards. The present tendency to substitute electric power for steam is a great step towards the prevention of accidents, because of the abolition of engines, fly-wheels, &c. Another advantage of electric-power driven machinery is the possibility of installing small motors in each part of the factory, practically for every machine, with the control easily reached. It would be a valuable aid towards preventing accidents due to machinery if each machine was provided with proper safeguards in the establishment where it is manufactured.

Accidents.—One fatal accident occurred in my district. At a large paper making factory an employee crawled under a paper calendar for the purpose of removing some waste paper from the floor directly under the rolls. On returning from his position the paper became caught in the rolls. Instead of letting the paper go through the rolls he made a grab at it with the result that one of his hands was drawn into the rolls. Medical attention was given, but the employee died from shock. The waste paper which gathers on the floor under the rolls can be removed with safety from another entrance, but in this case the employee crawled between another opening in the machine. To prevent accidents of a similar nature instructions were served to securely fence the rolls of the machine.

At a tannery an employee was fixing a belt on a revolving pulley, at a height of 10 feet from the floor level when his arm was caught between pulley and belting. A great many accidents due to belting are caused by hand shifting, and one of the cardinal principles of safety in a factory is the absolute prohibition of handling a belt without using proper shifters. Perhaps there is no more dangerous part of the machinery than the rapidly moving shafts through which the power is transmitted from the motor. The safeguarding of a shaft is necessary whether it is located near the floor or near the ceiling or in any part of the building where it is in the proximity of the employees either at all times or at certain times when the machinery is being cleaned, &c. Other accidents of a minor nature were inquired into.

Sanitation.—The sanitary care of a factory and provision of necessities and comforts for the use of employees are indispensable to industrial efficiency, and much attention has been given to this. With motive power installed in practically every factory there is no reason why a system of vacuum cleaning should not be installed and maintained in most factories.

Mr. Inspector Reyburn reports :—

I entered the Department on 2nd April, 1928, and was attached to Inspector Henstock until his retirement in July, 1928, when I was given charge of No. 10 district.

Registrations.—There have been several modern new buildings erected in the city area, in which extensive provision has been made for better lighting and hygienic conditions.

Sanitation.—Conditions were fairly well maintained in the city, but in some of the suburban districts the pan system is still in use, which requires close attention.

Fencing of Machinery.—Close attention has been paid to this section of the work, and wherever possible, metal guards have been introduced, which provide better guarding than the type generally used.

Accidents.—One of the most serious accidents which came under my notice happened to a lad of 14 years, who lost his right hand in a wood-working machine. He was employed contrary to the Act in "tailing out," and inadvertently placed his right hand on the roller at the back of the cutters. It was drawn in and amputated at the wrist. The Department took action against the occupier for employing the lad contrary to the Act and not securely fencing the machine.

A number of other accidents investigated, but the greater majority were not of a serious nature.

Bakehouses.—Close attention was paid to this section and instructions given for periodical limewashing in quite a number of bakehouses.

Certificates of Fitness.—In some cases I found that the occupiers had failed to obtain the necessary certificates. The necessary instructions were given.

Boiler Regulations.—In a number of cases instructions had to be given to the occupiers to have air vessels and boilers tested, and certificates exhibited under glass.

Mr. Inspector Smith reports :—

Registrations.—I found a number of factory premises unregistered and gave the necessary instructions which were promptly observed.

Structural Alterations.—In a number of cases I found it necessary to require alterations and improvements. In one instance portion of an upholstering factory had to be demolished and rebuilt to conform with the requirements of the Act.

Fire Escapes.—In factories where fire escapes were necessary, the co-operation of the Fire Brigade Department was secured, and their recommendations carried into effect.

Boiler Certificates.—Except in a few cases, I found occupiers were observing the regulations satisfactorily.

Certificates of Fitness.—In many cases instructions were served on occupiers to obtain certificates of fitness for persons in their employ, under the age of 16 years. On subsequent visits to these factories, it was found that the instructions had been complied with.

Hygiene.—In a number of cases I found it necessary to issue instructions to improve existing conditions.

Fencing of Machinery.—Most occupiers are eager to accept any practicable suggestion offered. A certain amount of carelessness is shown by individual employees, inasmuch as a guard is often detached to make an adjustment and not replaced immediately.

Accidents.—Three fatal accidents occurred in my district.

A youth was severely burned as a result of his clothing, which was saturated with kerosene, coming in contact with a flame whilst lighting a cigarette during the lunch hour.

Whilst descending a ladder, a rigger overbalanced and fell, striking his head heavily on the ground.

At another works a man was operating a swing grinder. The abrasive wheel burst and dislodged a guard, which struck the operative, inflicting injuries which resulted in his death.

A number of minor accidents received attention.

Mr. Inspector Weir reports :—

Upon commencing duties in the Department on 2nd April, 1928, I was assigned to assist Mr. Inspector Durack until 1st August, 1928, when I was given charge of No. 8 district, which comprises the suburbs of Redfern, Darlington, Chippendale, Five Dock, Abbotsford, Burwood, Mortlake, Cabarita, Concord, Flemington and Homebush.

Several visits were made to the large industrial works at Port Kembla, and special attention was given to the steel works, where the new 800-ton automatically charged " Freyn " blast furnace is now in operation, probably the largest in the Southern Hemisphere.

Registrations.—A modern factory has been erected at Cabarita for the manufacture of " Duco," a nitro-cellulose varnish, and the outstanding feature from a safety viewpoint is the up-to-date apparatus and appliances that have been installed with the object of eliminating any possibility of fire or explosion caused by electricity or friction sparks from moving machinery.

Structural Alterations and Ventilation.—It is pleasing to note the tendency of occupiers to consult Departmental officers when about to make additions or alterations.

At a textile factory a serious dust nuisance was investigated, and instructions were given, also suggestions as to the layout of exhausting arrangements. These improvements were adopted and duly carried out, resulting in greatly improved conditions.

Fire Escapes.—A new four (4) storied building in the city was found wanting in this respect, and the structure was subsequently altered to provide for alternate means of escape by a totally enclosed internal staircase. In this case a saving may have been effected had the occupier owner complied with section 39 (5) of the Act.

Boiler Regulations.—In a few cases it was necessary to instruct occupiers in this regard; these were mostly for air receivers in paint spraying establishments.

Accidents—Fencing and Guarding of Machinery.—No fatal accident occurred in this district.

An accident occurred at a large city factory, when an employee was scalded about the face and arms with boiling pitch. He was operating a pitch spraying machine when he inadvertently moved the two-way control-handle, which caused a shower of hot tar to envelop his face and arms. The burns were serious and necessitated continuous treatment in hospital for about two months, after which he resumed his previous duties none the worse for his narrow escape.

A suggestion was put forward to make the control handles on these machines automatically lock in the neutral position. The management responded with alacrity, and the principle was applied, giving very satisfactory results.

Mr. Inspector Williams reports :—

Registrations.—A large number of new registrations were effected.

Sanitation.—Many occupiers are inclined to neglect this important obligation.

Accidents.—Fortunately all the accidents I investigated were of minor nature.

Bakehouses.—Quite a number of occupiers were lax in keeping their premises limewashed, and I found it necessary to serve them with instructions to do so.

Certificates of Fitness.—Most occupiers were attentive in this regard, except in some cases where the occupier was new to business.

Fire Escapes.—It is hard to understand why some occupiers allow steel escapes to rust until they reach such a condition that it is necessary to order extensive renovations, which could be easily averted by painting the escape periodically, thereby saving money, time, trouble, and last, but certainly the greatest consideration of all, the prevention of a possible catastrophe in the event of fire.

Fencing Machinery.—This important phase of the Act still needs vigilant attention. Many occupiers and operatives are prone to be extremely careless.

Boilers.—Occupiers, with exceptions, had their boilers tested and certificates exhibited in accordance with the regulations; where necessary, instructions were served.

Senior Inspector Miss Harriott, B.A., reports :—

Registrations.—During the period under review I dealt with 100 applications for registration under Factories and Shops Act.

Changes of occupancy as usual accounted for the majority of these, though thirty new factories were added to the register, including three hosiery mills.

A new boot factory is particularly noticeable for its fine floor space and excellent system of ventilation.

A factory manufacturing a fish paste made from locally caught fish was registered.

Structural Conditions.—Trouble was experienced in regard to the lavatory accommodation connected with a factory and a number of shops in a reconstructed city building. Temporary arrangements had to be made pending a further alteration. The difficulty would not have arisen, if, in the first place, the plans had been submitted to the Department for approval.

In several factories structural alterations were found necessary to bring premises into conformity with the requirements of the Act.

Overtime.—Owing to a general depression in trade the amount of overtime worked during the year was not as great as usual.

In the last two months there was rather a marked increase in the overtime notified, and two firms were granted extensions on my recommendation.

Certificates of Fitness.—During the year I investigated seven applications for permits for children under 14 years, and in each case I was able, owing to the special circumstances, to recommend issue, and permission was granted.

General.—Special attention was paid to the sitting accommodation for women, both in factories and shops, and in several large retail establishments. Seats were provided behind counters, as required under section 26 of the Act.

In the early part of the year there was a great deal of unemployment and part-time work among women factory workers, especially those connected with unskilled labour, but as the year went on trade appeared to revive somewhat.

Inspector Miss Brown reports :—

Registrations.—Applications for registrations were exceptionally heavy throughout the year, a considerable number being for new premises.

In my investigations I found an occupier in an unregistered factory which had been in operation for the previous eighteen months. Proceedings were taken, and a fine inflicted.

Structural Alterations.—Among the new buildings, one, housing three factories, was constructed, minus any permanent ventilation. This defect was remedied, at my instigation, by placing louvres at intervals in window frames covering each aspect. In two other factories, interior lavatory accommodation was built within the building alignment, without proper enclosure or ceiling or means of ventilation by louvred openings to outside air—all evidencing the ignorance of, or disregard of provisions of the Act by architects concerned. In many re-registrations, often involving change of industry also, the opportunity was seized to have various alterations and necessary renovations effected, in order to maintain conditions according to existing standards.

Sanitation.—All necessary orders served were promptly complied with.

Overtime.—In a suburban knitting factory covering about fifty employees, a considerable amount of overtime had been worked prior to my inspection, but no notification of same had been sent to the Department. Proceedings taken against this occupier, who had previously been warned, resulted in a substantial fine and costs. In a dyeing and cleaning factory, investigation showed similar breaches with similar proceedings and results.

Certificates of Fitness.—In a suburban clothing factory several girls were employed without the necessary certificates. Action was taken in two cases, and a fine inflicted in each case. Similarly, in a city knitting factory, same offence with same results.

In a city clothing factory two girls were employed working power machines for a considerable period, for whom no certificates of fitness had been procured, and on action being taken a penalty was inflicted in each case. In similar actions taken against the occupier of a chemical works, the presiding Magistrate commended the Department for the protection afforded and enforced for young children entering industry.

I investigated seventeen applications under section 40, for permits, by special permission of the Minister, for girls under 14 years of age to be employed in factories.

Inspector Mrs. Duncan reports :—

Registrations.—Numerous registrations were dealt with during the year, which in most cases were due to change of occupiers. Several new and up-to-date factories were erected in my district, in which much care and attention was given to ventilation, sanitation and lighting arrangements.

Sanitation.—In the more up-to-date factories very little trouble is experienced in sanitary arrangements, but in the older buildings constant supervision is necessary to maintain a satisfactory standard of cleanliness. Several occupiers were served with notices, instructing them to limewash their premises, including lavatories, and clean up generally. In all cases the instructions were carried out in the time given.

Structural Alterations.—In one large woollen mill I was successful in having a comfortable dining and dressing room provided.

Overtime.—The overtime section of the Act was in most cases carefully observed, and only in one instance did I find that the time allowed had been exceeded without first obtaining permission of the Minister.

Certificates of Fitness.—At one factory I found two girls working without certificates, and as the occupier had previously been carefully instructed in this matter action was taken by the Department and a penalty imposed.

Several investigations were made under section 40, which resulted in disclosure of necessitous circumstances, and I recommended to the Minister the granting of the applications.

Welfare Work.—In most of the large factories welfare work is being maintained, and is much appreciated by the employees.

Inspector Mrs. Larkin reports :—

Although appointed an Inspector under the Factories and Shops Act, I did not take up duty until 1928, when I was associated with Senior Inspector Miss Harriott, and later with Inspector Miss Scobie. In September I was allotted a district, and although it covers a scattered area, I have visited the majority of the factories.

Overtime.—My inquiries proved that overtime was being discouraged except in the case of urgency. In four cases, however, extension of overtime was asked for and granted by the Minister.

Ventilation.—In three instances I had to order structural alterations on account of overcrowding; these instructions were promptly carried out.

Sanitation.—This important feature was well observed. In many instances a permanent attendant was kept to ensure perfect cleanliness in the accommodation provided for women.

Certificates of Fitness.—I investigated eight applications for these certificates, also three where the applicants were under 14 years of age. The mothers were found to be in indigent circumstances, and certificates were granted. I kept in touch with these girls, who were healthily employed, and in all cases they were persuaded to attend continuation schools. I found several children under the age of 16 working without permits. These were procured without delay.

Inspector Miss Grace Scobie, O.B.E., reports :—

Registrations.—Registrations were not as numerous as in the preceding year, the majority being transfers.

Structural Alterations.—A large engineering firm situated in an outlying suburb made extensive additions to the plant in order to accommodate female labour not hitherto employed. As the firm gave me the opportunity to visit the premises before the completion of the alterations, I was able to make suggestions likely to add to the comfort of the female employees.

Hygiene.—A fairly high standard of cleanliness was maintained in those factories which came under my notice. Upon occasions I found it necessary to direct attention to unsatisfactory conditions. Investigation proved in some of these instances that the fault lay rather with the employees than with the occupier. There are in my opinion two outstanding matters of importance which bear upon the health and wellbeing of female employees and call for consideration. These are continuous and jarring noises associated with certain industries, and vibration due to defective construction of factory premises.

Certificates of Fitness.—During the year I investigated and reported upon eighteen (18) applications for special permits for girls under the age of fourteen years, and owing to the necessitous circumstances of the families concerned the permits, with one exception, were issued.

General.—In the early part of the year I made a special investigation into the methods adopted, and the materials used, in the sealing of cans containing fruit, jam and meat.

An outstanding feature of the year's work was the duty which devolved upon Inspectors, for the first time, to see that first-aid cabinets were installed in conformity with the regulations under the Act. Notwithstanding the general depression prevailing in every class of industry, the promptness with which occupiers complied with the regulation is to be commended.

Inspector Miss Stuart-Robertson reports :—

Registrations.—Throughout the year I have been particularly busy with applications for registration of factories and also inspecting premises at the request of prospective occupiers, who wished to have the Inspector's assurance that the premises were suitable for the industry to be carried on therein before entering into occupation. I frequently found unregistered factories, but matters were satisfactorily adjusted when I served orders on the occupiers to apply for registration. In only one instance was it found necessary to prosecute.

Structural Conditions.—Steady progress was maintained in the construction of factory premises. In the city area under my supervision great improvement is evident. The up-to-date construction of new buildings has had its effect on owners of old premises, which have been reconstructed and brought as far as possible to the standard of present-day requirements.

Sanitation.—I have found it necessary to frequently visit some old premises, housing small factories, the occupiers of which do not appear to realise that frequent cleaning is necessary to keep such buildings in a sanitary condition.

In a new and very large building I found that the sanitary conveniences, though constructed of the latest and best material and all fittings up to standard, were not ventilated to the outer air. I pointed out this serious defect to the occupier, who immediately sent for the builder to have the necessary ventilation provided.

Certificates of Fitness.—I frequently found girls under 16 years of age who had not obtained this very necessary certificate. In two of these cases the examining doctor prescribed only light duties.

Overtime.—I have found the provisions of the Act mostly complied with, and in only a few instances have I found it necessary to serve orders for stricter observance of section 43.

Sitting Accommodation.—I found section 26 fairly well observed, but in the large retail shops (with a few exceptions) it was totally disregarded, and I have given this matter a good deal of attention. In one instance on my report legal action was taken against the shopkeeper, which resulted in conviction and a substantial fine. This action had the effect of sitting accommodation being provided by the shopkeeper for 100 shop assistants.

General.—Many small factories with the minimum of employees have further reduced their staffs, so that their workrooms are not covered by the Factories and Shops Act. This has been done with the object of being relieved from paying registration fees and sending in records.

Newcastle District.

This district is bounded by a line extending from the sea opposite Morisset to a point just north of Martinsville, thence south-west to a point north of Wiseman's Ferry, thence north-westerly to and including Cassilis, thence north-easterly to and including Werris Creek, thence easterly north of Nowendoc and Comboyne, thence southerly to and including Cundletown, thence easterly to the sea.

It is served by the main northern railway line and its branch to Merriwa, and by the North Coast railway line.

There are approximately 1,185 factories registered within this district, which covers an area of approximately 15,500 square miles.

The Department has a branch office at Newcastle, where three inspectors are stationed.

Mr. Superintending Inspector Clark (Officer-in-Charge), Newcastle, reports :—

During the year much of my time was devoted to supervisory work in connection with the administration of the Branch, which covers the registration and selection of men for employment, the distribution of food relief to persons in necessitous circumstances, and inspectorial work under the Industrial Arbitration Acts and Early Closing Acts, in addition to the Factories and Shops Act.

Fencing and Machinery.—Progressive advance is being made in this regard, with resultant benefit to those whose duty it is to operate dangerous machinery. Vigilance and systematic investigations continue, however, to be of essential importance, otherwise familiarity with recurring risks breeds complacence which often results in serious disability. Factory discipline is an important essential of safety requirements, experience having shown that many accidents arise from the absence, or the faulty adjustment, of guards which might have been prevented had this factor been more seriously considered.

Accidents.—No fatal accidents or any causing serious loss of limb occurred in my district during the year, those reported being mostly minor lacerations to fingers and hands and from burns.

General.—The Branch had the co-operation of the industrial community generally in applying the provisions of the Act, and the staff worked harmoniously to contribute to this end.

Mr. Inspector MacCubbin (Newcastle) reports :—

Sanitation.—It was necessary on a few occasions to instruct occupiers to pay more attention to the cleanliness of conveniences.

Fencing and Guarding of Machinery.—Occupiers generally have complied with the Act and regulations fairly well and with a much improved type of fencing and guards. When installing new machinery, metal guards are now being adopted, which enables a greater degree of safety to be maintained. The direct motor drive to machines also eliminates much risk of accidents arising from belting and mill gearing.

Accidents.—One accident occurred in my district, causing injuries which terminated fatally. A sawdust attendant employed at a large sawmill, part of whose duty it was to repair the sawdust blower belt, apparently went inside the guard rails to repair and tighten the sawdust blower fan belt, and after he had cut off portion of it and punched the holes, he was attempting to place same around the revolving shaft in readiness for lacing it. The end of the belt caught his right arm, and before he could extricate himself the belt wound around his arm and the shaft, and his body was whirled round and round until his right arm was torn out and he was thrown heavily to the floor.

A number of minor accidents under section 38 (d) was investigated.

Certificates of Fitness.—In most instances this section of the Act is well observed, there being only a few occasions when it has been necessary to issue instructions to obtain the necessary certificate.

Boilers.—These regulations have also been observed. Only in a few cases was it necessary to instruct the occupier to have the boiler tested and to exhibit the certificate under glass.

General.—Much is being done by the goodwill and co-operation of the manufacturers, employers and employees with a view to improving hygienic and other conditions, with the result that the factories generally are on the up grade.

Mr. Inspector Young (Newcastle) reports :—

Registrations.—I visited the whole of the factories in my district twice during the year and found many changes in ownership had taken place. Renewal of registrations required attention in every town, and in five cases summonses were issued against persons for being in occupation of unregistered factories.

Fencing Machinery.—I found the provisions of the Act and regulations well observed.

Sanitation.—I found premises kept fairly clean. The pan system is still in operation in many districts and requires constant attention, especially where foodstuffs are prepared. Several firms have septic tanks, and I am of the opinion that the Act could well be amended to compel occupiers in many cases to instal septic tanks.

Fire Escapes.—Instructions were issued to two occupiers to instal fire escapes.

Accidents.—Accidents were of a minor character, many being under section 38 (d), caused by employees tripping or allowing materials or tools to fall upon their feet or fingers. Where obstructions were noticed, instructions were issued to keep passage-ways and floors clear.

Bakehouses.—Many of the bakehouses in this district are old buildings and require constant attention, but I found such places reasonably well kept and the occupiers ready to adopt my suggestions.

Certificates of Fitness.—In country towns I found it necessary to instruct occupiers to obtain certificates for boys under 16, but in the Newcastle and Maitland districts the provisions of the Act are well known, and there is a constant stream of callers for certificates, the boys and girls being fairly well absorbed as they leave school.

North Coast District.

This district is bounded by a line extending from the sea to a point just north of Cundletown, thence northerly to a point east of Comboyne, thence westerly to a point north-east of Nowendoc, thence northerly to a point on the Queensland border north of Unungar, thence along such border eastwards to the sea.

It is served by the North Coast railway line and its branches to Dorrigo and Kyogle, the latter branch being now extended to connect with the Queensland railway line at Beaudesert.

There are approximately 510 factories within this district, which embraces an area of approximately 14,300 square miles.

The inspector who has charge of this district operates from the Head Office and visits all parts of it regularly.

Mr. Inspector Hastie reports :—

During the year I remained in charge of the North Coast District, operating from Head Office with tours of 18 to 21 days' duration. Between tours my time was fully occupied in the Metropolitan District.

Registrations.—Registrations were numerous, but mostly confined to changes of occupiers. Of these, bakehouses, smallgoods factories and motor-repair shops predominated.

With the progress made in the motor industry, it is pleasing to notice the number of the vulcanizing and rubber re-tread plants that have been registered. All the principal towns in the district have at least one such plant. Owing to the introduction of the spray painting of cars, a number of these plants have also been registered.

Sanitation.—Where necessary, instructions were given to cleanse and renovate premises.

Fencing of Machinery.—In the majority of the sawmills, especially those erected within recent years, the shafting is all underneath the floor, thus obviating the danger of overhead shafting and belts. The section of the Act dealing with the guarding and fencing of machinery was generally well observed.

Accidents.—No serious accidents were reported during the year, but a number of minor accidents were investigated; the majority being caused by the injured person falling or slipping and striking objects. Since the advent of the Amending Act of 1927, some occupiers seem to think that once they have reported an accident to their insurance company their responsibility under the Factories and Shops Act ceases. I have on occasions drawn the occupier's attention to their obligation to report such accidents to the Department.

Bakehouses.—These, with a few exceptions, were in conformity with the Act and regulations. In some cases it was found necessary to issue instructions to limewash the interiors.

Boilers.—The regulations governing boilers were well observed by occupiers, there being no necessity to report any breaches; although it was found necessary to instruct new occupiers, and also others that had installed air compressors and the necessary air receiver or container, to obtain and exhibit a certificate for the pressure vessel. No trouble was experienced in having the instructions observed.

General.—All main towns were visited twice during the year, and most of the outlying towns once, and some twice. It is pleasing to note that generally factory occupiers observe their obligations under the Act and make every effort to assist the inspector in fulfilling his duties.

On one occasion whilst visiting a sawmill I saw the engine driver climb over a fence erected to protect a large belt 12 in. in width, walk between the travelling belt, and then oil a bearing. This was done to save walking a distance of about 40 feet. I spoke to him, pointing out the danger of losing his life, and his obligation to his family. His reply was, "I did not stop to think."

North-Western District.

The district is bounded by a line drawn easterly from a point just north of Werris Creek to a point north-east of Nowendoc, thence north-easterly to the Queensland border at a point north of Unungar, thence westerly along that border to a point just south of Curriwillinghi (Q.), thence due south to a point about 16 miles north of Carinda, thence easterly and north of Pilliga to and including Bullerawa, thence south-easterly to a point just north of Tambar Springs, thence easterly to the point of commencement.

It is served by the main northern and north-western railway line and branches.

There are approximately 480 factories registered within the district, which covers an area of approximately 42,100 square miles.

Owing to the vacancy created by the retirement of the inspector formerly in charge of this district not being filled till the end of the year, arrangements were made for inspections therein by officers from the Metropolitan District.

Mr. Inspector Armstrong reports :—

At the beginning of the year I was transferred from a Metropolitan District to take charge of the North-Western District.

Registrations.—Owing to lack of staff and irregularity of inspections in the major portion of this district for a lengthy period, it was necessary to almost pioneer portions of the district, as is shown by the number of new factories registered. I found quite a number of factories which had been operating for some time and were not registered. The general excuse of occupiers was that they had no knowledge of the Factories and Shops Act requirements, and thought all obligations were complied with when registering under the Firms Act. A particularly large number of motor garages, wherein mechanical power was installed, were registered for the first time, and there were the usual number of fresh registrations consequent upon the change of occupiers in established factories.

Fencing and Guarding of Machinery.—I am satisfied that the regular inspection of premises is necessary to ensure the permanent installation of safety devices and fencing. It is frequently observed, when a subsequent inspection of the premises is made, that fencing and safety devices have been removed, or broken, or reduced to a more or less inefficient condition. Whenever possible I am having the old type of wooden fencing replaced with tubular pipe and mesh wire, and am glad to report that at almost every town lighting plant substantial fencing of the latter type has been installed at the engines, flywheels and generators.

Sanitation.—On a number of occasions I had to direct occupiers to limewash and keep their conveniences in a more cleanly condition. Tamworth, perhaps the largest and most progressive town in this district, has recently been sewered, and expressions of appreciation are heard on all sides.

Accidents.—A sawmill proprietor had three fingers of his left hand amputated at a planing machine. He was dressing weatherboards at the 4-header when a splinter, probably from a shake, was thrown up by the cutters and jambed between the guide and the hood over the knives which also serve as a chip director. The injured person endeavoured to release it whilst the machine was in motion, and in so doing put his hand over the top of the head and on to the cutters, with the result stated.

Bakehouses.—I found it necessary to draw the attention of some occupiers to the condition of flooring which through wear and tear had become cracked and broken. Remedial steps were taken to make good the defects on receipt of an instruction. In several instances I gave instructions for the erection of separate bread rooms in the more congested bakehouses.

Certificates of Fitness.—In a few instances I had to enforce this important section of the Act, although where certificates were required it was found that the work on which the young persons were employed was not of a dangerous character.

South Coast District.

This district is bounded by a line drawn from the sea to a point just south of Helensburgh, thence south-westerly but east of Braidwood and Araluen and westward of Bemboka to a point on the Victorian border south-west of Nangutta, thence along that border to the sea.

It is served by the railway line from Helensburgh to Nowra and by motor car services from that point southward.

This district contains 200 factories and covers an area of approximately 5,400 square miles.

The Department has a branch office at Woonona where the inspector in charge of the district is stationed.

Mr. Inspector Waugh reports :—

Registrations.—A number of new registrations were dealt with during the year, the majority being re-registrations.

Sanitation.—Although handicapped by the pan system in vogue in my district, occupiers of factories are applying satisfactory attention to keeping the premises clean. The sewerage system at Wollongong is being pushed ahead and will be a boon to this part of the district when finished.

Bakehouses.—During the year several new bakehouses were erected. One erected at Woonona cost about £20,000, the ovens being heated by gas produced from coke.

Certificates of Fitness.—Occupiers mostly attend to these matters without having to be reminded.

Boiler Inspections.—I found boiler inspections regularly made, although some occupiers neglected to exhibit the necessary certificates as required. Instructions were given and promptly observed.

Fencing Machinery.—Little trouble is now experienced with occupiers using dangerous machinery. Where necessary instructions to efficiently guard same are given.

SOUTHERN DISTRICT.

This district is bounded by a line commencing south of Menangle and proceeding south-westerly to a point about 16 miles east of Braidwood, thence southerly and just east of Araluen to the Victorian border at a point south-west of Nangutta, thence north-westerly along that border to a point south-west of Trigateran, thence northerly and just west of Kosciusko, Batlow, Cootamundra, and Stockinbingal but including these towns to a point just west of Garema, thence easterly just north of Grawlin Plains and south of Eugowra to a point just south of Perthville, thence southerly to Isabella and thence easterly to the point of commencement.

It is served by the Main Southern line with its branches to Bombala, Crookwell, Grenfell and Boorowa, the railway from Demondrille to Blayney with its branch line to Canowindra, the branch line from Cootamundra to Tumut and the connecting railway line from Stockinbingal to Parkes. .

There are approximately 590 factories within this district which covers an area of approximately 25,030 square miles.

The inspector who has charge of this district operates from the Head Office and visits all parts of it regularly.

Mr. Inspector Wallace reports :—

Registrations.—During the year there were a large number of re-registrations caused by change of occupancy in various factories. A number of new factories were also registered.

Structural Alterations.—Instructions were issued to a number of occupiers to carry out necessary improvements and many structural alterations were also carried out at my suggestion.

Sanitation.—I find from long experience of factories where foods are prepared or manufactured that there is a tendency on the part of some occupiers and employees to become careless in respect to cleanliness and hygiene. Regular and thorough inspection is the sole cure.

Fencing Machinery.—The safety provisions of the Act were enforced with good results, considerably reducing the number of accidents.

Certificates of Fitness.—The applications were mostly received from the large towns. With the exception of an odd instruction this part of the Act was well observed.

Bakehouses.—I issued a number of instructions relating to cleanliness and warned certain occupiers of their neglect.

General.—During portions of the year in addition to district work I carried out inspections in the metropolitan area. The erection of new cement works at Berrima has progressed considerably, and it is anticipated that the manufacture of cement will commence about May, 1929. The limstone quarries at Marulan have been developed in preparation for the works. A new millet broom factory has commenced operations at Tumut, the brooms being manufactured from the millet grown in the Tumut district.

SOUTH-WESTERN DISTRICT.

This district is bounded by a line drawn from the Victorian border at a point south-west of Trigateran proceeding northerly to a point just west of Tumblong, thence to a point just south of Cootamundra, thence north-westerly and across the railway line at Springvale and westerly of the Stockinbingal-Parkes railway line to a point just west of Garema, thence north-westerly to a point just south of Euabalong, thence south of the Broken Hill railway line to Tolarno, thence south-westerly to Golgol on the Victorian border, thence easterly along that border to the point of commencement.

It is served by the main southern line with its branches to Lake Cargelligo, Hillston, Rankin's Springs, Westby, Hay, Toeumwal, Rand, Oaklands, Corowa, Tumbarumba, Holbrook, and the railway line from Deniliquin to Moama.

This district contains approximately 600 factories and covers an area of approximately 54,280 square miles.

The inspector who has charge of the district operates from the Head Office and visits all parts of it regularly.

Mr. Inspector McEvoy reports :—

Registrations.—There were a large number of registrations, including transfers dealt with during the year.

Structural Alterations.—Minor alterations to a few bakehouse premises were carried out in compliance with instructions given to occupiers.

Fencing of Machinery.—On the whole I found that the provisions of section 33 of the Act were fairly well observed. No objections were raised by any occupier with regard to carrying out instructions served in respect of fencing and guarding of mill-gearing and machinery. In some instances employees opposed compulsory use of guards provided at machines—generally to spindle moulder machines and circular saws. "Safety First" appears to be their last thought.

Certificates of Fitness.—In several cases I served notices on occupiers to obtain certificates of fitness in respect to boys under 16 years of age. The omission was generally the result of the occupier believing certificates were only necessary if the employees worked at certain machinery.

Bakehouses.—Cleanliness was fairly well observed in bakehouse premises, but notices had to be served on some occupiers with regard to limewashing of walls.

General.—Since the boundaries of the district were defined the number of factories has considerably increased, especially in main towns. Additional industrial awards and greater labour exchange activities have come into operation, and investigation of industrial complaints and attention to labour exchange matters have occupied a large proportion of my time.

Western District.

This district is bounded by a line drawn from a point just west of Perthville, through and including Blayney and just south of Cadia, thence westerly to a point just west of Grawlin Plains, thence west of the railway line to a point just south-west of Garema, thence north-westerly to and including Euabalong, thence westerly and just south of the Broken Hill railway line to Tolarno, thence northerly through Gunyulka to a point east of Wampah, thence along the Queensland border to a point just south of Curriwillinghi (Q.), thence southerly and westward of Carinda and south-easterly of Quambone to a point just south of Dubbo, thence south of the railway line to Merrygoen, excluding the towns thereon, thence southerly and just westward of Hill End and Bathurst to the point of commencement.

It is served by the Main Western line with its branches to Cobar and Brewarrina; the railway line through Molong and Parkes to Tolarno, the cross-country line from Parkes to Garema with its branches to Tottenham and Mount Hope.

There are approximately 390 factories within this district, which covers an area of approximately 86,870 square miles.

The Department has a branch office at Orange, which is the headquarters of this district and at which the inspector in charge of the area is stationed.

Mr. Inspector Baker reports :—

General.—The amendments to the Factories Act created an additional amount of work, particularly in regard to registration applications and registration fees. Many occupiers are extremely careless in these matters and will probably not improve until several have been prosecuted.

Many changes of occupancy took place during the year, but very few of the occupiers notified the Chief Inspector of the changes that had occurred.

Sanitation—Structural Alterations.—I found that a bakehouse had been added to the rear of the shop and extended right across the yard, thereby cutting off all access from the shop and dwelling to the conveniences in the yard. The owner was instructed by me to so alter the bakehouse that a clear passage-way between the shop and dwelling and the yard was restored.

In several instances roofs of sheds over saw benches were found to be under the minimum height, and on my instructions the defects were remedied.

At one factory there was no sanitary convenience nor water supply. Both were provided before the premises were registered. Several occupiers were instructed to limewash or paint inside walls and ceilings of factories, and further attention was given to the ventilation of bakehouses.

Boiler Inspections.—Where any uncertificated vessels were found, occupiers were instructed to have same inspected and to exhibit the certificates.

Fencing of Machinery.—In most of the factories visited fencing at dangerous machinery was found to be in a satisfactory condition. In a few instances fencing or guards had been partly removed during the carrying out of repairs, and had not been properly replaced. In all such cases occupiers were instructed to affix and maintain fencing and guards.

Accidents.—At a motor garage an employee lost an eye while enlarging the size of a hole in a chassis by means of a drill in a hand brace. He was inspecting the drill from the underside of the chassis and had his face directly over the hole. On the drill breaking through, the pressure he was exerting on the brace drove the drill rapidly upwards and its point entered his eye, which had to be removed.

An employee at a flour mill in attempting to replace a machine belt on a driving pulley was caught in the belt, which became entangled on the shafting and was whirled around with it. The employee informed no one of his intention to handle the belt, and the driving shaft was travelling at its full speed. The accident was witnessed by the only other employee then on that floor, and he rushed to displace the driving belt. It was found that the injuries received were, under the circumstances, slight—a fractured arm and many bruises. The fact that the employee was of light build, in my opinion, saved him from far more serious injury.

An employee at a woollen mill lost a joint of his index finger at a cloth-cutting machine. He attempted to remove some dust from near the revolving knives, and the finger was struck, with the result mentioned.

An employee at a firewood-cutting saw passed his hand too near to the revolving blade and lost the tips of two fingers.

There were a number of minor accidents reported, but on investigating I found that no permanent injury resulted.

Certificates of Fitness.—At a large woollen mill quite a number of the young employees who applied for certificates of fitness were found, after departmental inquiries had been made, to be under 14 years of age. The parents of the children had misstated their ages.

Central Western District.

This district is bounded by a line drawn south-west from and including Rooty Hill to a point just north of Burragorang, thence westerly to and including Isabella, thence northerly through and including Perthville, Bathurst and Hill End to and including Merrygoen, thence along the railway line to and including Dubbo, thence north-westerly to a point about 16 miles north of Carinda, thence easterly and including Pilliga to a point just south of Bullerawa, thence south-easterly to a point just south of Tambar Springs, thence easterly to a point just south-west of Werris Creek, thence south-westerly to a point just west of Cassilis, thence south-easterly to a point north of Wiseman's Ferry, thence south-westerly to a point north of Kurrajong Heights, thence south-easterly to the point of commencement.

It is served by the Main Western line to Perthville, the railway lines to Coonamble and Gwabegar and Coolah, and the cross-country line from Binnaway to Werris Creek.

There are approximately 440 factories registered within this district, which covers an area of approximately 18,500 square miles.

The inspector who has charge of this district operates from the Head Office and visits all parts of it regularly.

Mr. Inspector Varley reports :—

District.—An additional area was added to my district during 1928, embracing that portion of the country extending from Binnaway to the outskirts of Werris Creek.

Registrations.—There were quite a number of new registrations for the year, due to change of occupiers and a very close combing of the Pilliga Scrub area. A new barb wire and nail works commenced operations at Dubbo.

Structural Alterations.—I found it necessary in three instances to have structural alterations made to render the premises suitable for the industries operated.

Fencing and Guarding of Machinery.—This subject absorbed the major portion of my time, and particular attention was paid to the outlying country sawmills, especially those of a more or less mobile nature. I had occasion to give special attention to the machinery in a large flour mill which was not satisfactorily guarded.

Fire Escapes.—In factories where fire escapes were necessary the co-operation of the fire brigade department was secured and the necessary action taken to provide for approved means of escape in case of fire.

Certificates of Fitness.—A number of occupiers were warned regarding breaches of section 45.

Pressure Vessels.—This matter was given special attention, and in many cases it was found that no certificates had been obtained. All such cases were promptly reported.

Broken Hill District.

This district is bounded by a line drawn from between Wentworth and Gol Gol north-easterly and crossing the Broken Hill Railway line to a point just east of Gunyulka, thence north-westerly and east of Bootra and Connulpie Downs to a point on the Queensland border about 24 miles east of Wanpah, thence westerly along that border to the South Australian border, thence southerly along that border to the Victorian border, and easterly along that border to the point of commencement.

This district contains approximately 150 factories, and covers an area of approximately 44,750 square miles.

The Department has a branch office at Broken Hill, where the inspector in charge of the district is stationed.

Mr. Inspector Bennet (Broken Hill) reports :—

This district includes Wentworth, Wilcannia, and Menindee.

The number of factories is limited, but heavy demands are made upon the inspector apart from factory inspections in work under the Industrial Arbitration Act, Early Closing Act, Gas Act, Workers' Compensation Act, State Government Insurance Office, Rural Workers' Accommodation Act, and the State Labour Exchange.

Fencing and Guarding of Machinery.—Considerable time and attention was given to this most important subject, resulting in the satisfactory fencing and guarding of various machines, and to the extensions at the Municipal Electric Light Station, Broken Hill.

At a large timber mill in Broken Hill an exhaust dust collector was fitted to one of the woodworking machines, as mentioned in my last annual report. The result was so satisfactory that the system is being extended to embrace all the machines in the mill.

Bakehouses, &c.—Careful attention was given to the local bakehouses and smallgoods factories, and instructions were promptly observed.

Certificates of Fitness.—Four certificates of fitness were issued during the year to boys under 16 years of age.

Appendix I.

Persons employed, by Class of Factory, Classified by Industry—1928.

THE STATE.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
CLASS 1.—TREATING RAW MATERIAL, THE PRODUCT OF PASTORAL PURSUITS.												
(*a*) *Animal Products*												
Boiling-down and tallow-refining	7	1	...	4	...	1	...	105	...	111	...	111
Glue	2	...	...	1	10	5	33	96	22	102	65	167
Tanning	60	8	...	30	...	40	1	652	2	730	3	733
Wool-scouring and fellmongering	29	2	...	24	3	34	37	540	24	600	64	664
Other animal products	10	25	...	25	...	19	...	116	...	185	...	185
Total	108	36	...	84	13	99	71	1,509	48	1,728	132	1,860
(*b*) *Vegetable Products.*												
Chaff-cutting	79	...	...	4	...	13	...	263	...	280	...	280
Total, Class 1	187	36	...	88	13	112	71	1,772	48	2,008	132	2,140
CLASS 2.—OILS AND FATS—ANIMAL AND VEGETABLE.												
Oil and grease	7	6	...	15	...	18	...	141	...	180	...	180
Soap, candles, &c.	28	33	28	34	55	50	58	363	73	480	214	694
Total, Class 2	35	39	28	49	55	68	58	504	73	660	214	874
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &C.												
Asphalt	24	1	...	14	...	22	...	143	...	180	...	180
Brieks and tiles	141	143	6	244	4	259	8	2,755	31	3,401	49	3,450
Glass and glass bottles	11	55	3	82	8	101	6	879	4	1,117	21	1,138
Glass (ornamental)	35	23	...	72	...	76	2	335	1	506	3	509
Lime, plaster, and cement	17	12	...	23	...	42	...	1,161	...	1,238	...	1,238
Marble and slate	15	2	...	6	...	15	...	206	...	229	...	229
Modelling and fibrous plaster	47	4	1	28	...	44	1	228	...	304	2	306
Monumental masonry	31	1	...	17	...	38	...	273	...	329	...	329
Pottery and earthenware	13	62	...	54	...	45	...	335	...	496	...	496
Stone-dressing	42	1	...	5	...	15	...	334	2	355	2	357
Other works	13	1	...	5	...	23	...	138	...	167	...	167
Total, Class 3	389	305	10	550	12	680	17	6,787	38	8,322	77	8,399
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	1	...	...	...	...	...	...	9	...	9	...	9
Boxes and packing-cases	60	16	...	34	...	57	4	659	4	766	8	774
Cooperage	10	2	...	23	...	16	...	210	...	251	...	251
Joinery	364	61	1	354	3	472	8	2,898	4	3,785	16	3,801
Saw-milling—Timber	415	20	...	187	11	282	7	3,080	2	3,569	20	3,589
Firewood	154	...	...	8	...	7	...	218	...	233	...	233
Wood-turning	14	6	...	12	...	10	2	59	4	87	6	93
Other works	31	10	7	22	7	40	2	215	13	287	29	316
Total, Class 4	1,049	115	8	640	21	884	23	7,348	27	8,987	79	9,066
CLASS 5.—METAL WORKS, MACHINERY, &C.												
Agricultural implements	11	2	...	14	...	21	...	165	...	202	...	202
Brass and copper...	78	40	1	104	3	147	5	753	5	1,044	14	1,058
Cutlery	30	8	5	14	4	23	1	190	...	235	10	245
Engineering	346	291	9	791	29	987	33	6,214	29	8,283	100	8,383
Galvanised iron	45	29	...	160	...	219	...	1,058	...	1,466	...	1,466
Iron works, foundries, and boilermaking ...	200	98	...	372	...	596	1	8,145	4	9,211	5	9,216
Iron safes and doors	5	6	...	9	...	4	...	36	...	55	...	55
Lead-mills...	2	...	...	1	...	...	...	6	...	7	...	7
Railway carriage works	5	14	...	35	...	64	...	549	4	662	4	666
Smelting and ore dressing	3	...	...	3	...	4	...	221	15	228	15	243
Stoves and ovens...	11	28	10	40	8	518	12	86	27	672	57	729
Tinsmithing	28	99	37	154	71	186	99	552	146	991	353	1,344
Wire-working	25	56	...	131	22	289	13	1,728	9	2,204	44	2,248
Other metal works	94	171	12	211	25	229	27	1,044	20	1,655	84	1,739
Plumbing	31	6	1	22	...	41	3	306	5	375	9	384
Farriery	10	...	...	2	...	1	...	23	...	26	...	26
Total, Class 5	924	848	75	2,063	162	3,329	194	21,076	264	27,316	695	28,011
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(*a*) *Animal Food.*												
Bacon	16	4	...	6	...	23	...	208	...	241	...	241
Butchers' smallgoods	1,115	19	...	63	...	95	1	1,866	5	2,043	6	2,049
Margarine	5	2	1	5	1	26	...	137	1	170	3	173
Meat-preserving	20	38	1	61	11	38	11	576	61	713	84	797
Total	1,156	63	2	135	12	182	12	2,787	67	3,167	93	3,260

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total
CLASS 6.—CONNECTED WITH FOOD AND DRINK AND THE PREPARATION THEREOF—*continued.*												
(b) Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.												
Biscuits	12	155	235	171	250	112	259	416	357	854	1,101	1,955
Bread and pastry	1,376	91	11	484	32	443	45	2,871	241	3,889	329	4,218
Confectionery	161	85	285	121	432	136	440	853	459	1,195	1,616	2,811
Corn-flour and oatmeal	17	25	23	29	39	52	56	240	58	346	176	522
Flour-milling	57	5	1	22	2	79	2	704	2	810	7	817
Jam and fruit preserving	31	5	7	18	23	35	26	210	112	268	168	436
Pickles, sauces, and vinegar	9	1	...	12	1	24	3	71	31	108	35	143
Poultry foods and dog biscuits	9	4	...	8	...	8	...	63	...	83	...	83
Self-raising flour	4	3	10	2	17	5	15	11	13	21	55	76
Sugar-refining	6	8	1	4	...	18	7	585	4	615	12	627
Total	1,682	382	573	871	796	912	853	6,024	1,277	8,189	3,499	11,688
(c) Drinks and Stimulants.												
Aerated waters and cordials	176	18	1	121	14	128	16	510	43	777	74	851
Brewing	15	1	15	19	18	50	28	1,044	19	1,114	80	1,194
Condiments, coffee, spices, &c.	42	21	89	31	121	39	172	298	243	389	625	1,014
Distillery	2	...	...	...	...	1	...	51	...	52	...	52
Ice and refrigerating	210	18	3	44	6	53	19	835	27	950	55	1,005
Tea blending and packing	12	20	15	5	24	6	22	40	15	71	76	147
Wine, spirits, and beer bottling	47	1	...	18	...	47	14	307	48	373	62	435
Total	504	79	123	238	183	324	271	3,085	395	3,726	972	4,698
(d) Narcotics.												
Tobacco, cigars, and cigarettes	9	51	161	33	262	82	317	680	669	846	1,409	2,255
Total, Class 6	3,351	575	859	1,277	1,253	1,500	1,453	12,576	2,408	15,928	5,973	21,901
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(a) Textile.												
Woollen mills	26	142	247	150	321	149	448	815	981	1,256	1,997	3,253
(b) Dress.												
Boots and shoes :—Order made	703	36	10	74	17	74	13	1,032	38	1,216	78	1,294
Factory made	88	173	291	305	285	151	311	1,881	972	2,510	1,859	4,369
Clothing :—Men's slops	48	19	225	38	355	53	411	335	1,075	445	2,066	2,511
Women's slops	155	15	337	21	411	27	452	191	1,380	254	2,580	2,834
Tailoring	323	34	280	73	485	85	568	1,085	1,937	1,277	3,270	4,547
Corsets	8	1	67	3	133	2	176	15	259	21	635	656
Dressmaking and millinery :—												
Makers' material	254	15	555	24	724	37	843	157	1,657	233	3,779	4,012
Customers' material	113	...	66	...	87	...	90	10	226	10	469	479
Dye works	31	7	3	18	25	22	43	176	100	223	171	394
Furriery	32	16	4	32	50	41	68	124	104	213	226	439
Hats and caps	24	23	84	42	144	51	150	260	298	376	676	1,052
Hosiery and knitting	67	52	415	90	538	165	709	415	1,159	722	2,821	3,543
Oilskin and waterproof clothing	9	...	16	3	19	3	27	25	74	31	136	167
Shirts, ties, and scarves	52	8	274	25	351	20	389	86	754	139	1,768	1,907
Umbrellas	6	2	9	5	20	3	31	23	63	33	123	156
Underclothing	128	10	392	12	430	22	456	105	743	149	2,021	2,170
Wigs and hair work	7	1	3	1	2	3	8	16	12	21	25	46
Total	2,048	412	3,031	766	4,076	759	4,745	5,936	10,851	7,873	22,703	30,576
(c) Fibrous Materials and Textiles not elsewhere included.												
Bags and sacks	13	13	36	20	42	31	36	143	84	207	198	405
Rope and twine	9	16	11	56	24	30	22	81	17	183	74	257
Tents and tarpaulins	17	8	17	12	19	10	31	59	101	89	168	257
Total	39	37	64	88	85	71	89	283	202	479	440	919
Total, Class 7	2,113	591	3,342	1,004	4,482	979	5,282	7,034	12,034	9,608	25,140	34,748
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	24	13	2	36	2	66	5	191	3	306	12	318
Electrotyping and stereotyping, type founding, and printers' materials	13	3	1	8	2	14	6	143	6	168	15	183
Paper bags and boxes	18	77	174	54	209	72	234	238	285	441	902	1,343
Paper mills, cardboard, and strawboard	7	18	13	28	31	15	27	124	71	185	142	327
Photo.-engraving, photo.-lithography, and photo. materials	47	9	39	15	53	25	93	111	235	160	420	580
Printing, bookbinding, and manufacturing stationery	551	327	256	602	412	750	451	4,713	857	6,392	1,976	8,368
Total, Class 8	660	447	485	743	709	942	816	5,520	1,457	7,652	3,467	11,119
CLASS 9.—MUSICAL INSTRUMENTS, &C.												
Pianos, organs, and sewing-machines	29	15	6	50	9	92	21	516	42	673	78	751

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	3	2	...	2	3	1	2	5	1	10	6	16
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY, HARNESS, &c.												
Coaches and waggons	124	13	...	64	...	86	...	504	1	667	1	668
Cycles and motor cars	982	259	...	876	1	1,100	3	4,348	44	6,583	48	6,631
Perambulators, &c.	5	7	...	7	...	8	...	62	1	84	1	85
Saddlery, harness, &c.	29	3	7	3	2	5	4	130	32	141	45	186
Naves, spokes, &c.	...	...	...	...	...	...	...	...	...	...	...	...
Whips	1	...	...	...	...	1	...	3	...	4	...	4
Total, Class 11	1,141	282	7	950	3	1,200	7	5,047	78	7,479	95	7,574
CLASS 12.—SHIPBUILDING, FITTINGS, &c.												
Docks and slips	2	...	...	2	...	1	...	3	...	6	...	6
Sailmaking	8	...	2	2	...	4	...	16	3	22	5	27
Ship and boat building	28	2	...	26	...	50	...	381	...	459	...	459
Total, Class 12	38	2	2	30	...	55	...	400	3	487	5	492
CLASS 13.—FURNITURE, BEDDING, &c.												
Bedding, flock, and upholstery	91	47	46	90	93	121	101	602	306	860	546	1,406
Carpet-sewing	4	...	4	4	3	5	7	45	33	54	47	101
Iron bedsteads	3	6	1	6	3	10	2	91	17	113	23	136
Billiard tables	...	...	...	...	...	...	...	...	...	...	...	...
Chair-making	13	7	1	18	...	32	1	141	...	198	2	200
Furniture and cabinet making—												
European	260	88	5	269	5	463	11	2,175	15	2,995	36	3,031
Chinese	13	...	...	...	...	...	...	55	...	55	...	55
Bamboo and wicker	12	8	...	10	...	35	2	140	1	193	3	196
Picture frames	26	6	2	21	5	13	14	89	34	129	55	184
Window blinds	12	11	2	12	3	12	3	77	8	112	16	128
Total, Class 13	434	173	61	430	112	691	141	3,415	414	4,709	728	5,437
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c.	18	16	19	20	37	17	64	125	82	178	202	380
Chemical works and drugs	61	56	46	61	100	57	102	443	165	617	413	1,030
Fertilisers	3	1	...	4	...	3	1	114	2	122	3	125
Perfumes and essences	12	11	42	21	48	13	47	66	50	111	187	298
Paints and varnishes	18	36	21	49	10	56	16	391	23	532	70	602
Other Minor Works	7	3	...	8	1	2	1	79	...	92	2	94
Total, Class 14	119	123	128	163	196	148	231	1,218	322	1,652	877	2,529
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	35	2	...	11	...	28	...	102	...	143	...	143
Surgical instruments	10	4	2	...	...	6	3	42	5	52	10	62
Other Minor Works	5	...	...	4	...	1	...	9	...	14	...	14
Total, Class 15	50	6	2	15	...	35	...	153	5	209	10	219
CLASS 16.—TIMEPIECES, JEWELLERY, AND PLATEDWARE.												
Electroplating	35	12	12	39	14	45	29	251	39	347	94	441
Jewellery	81	23	7	38	18	62	29	402	59	525	113	638
Total, Class 16	116	35	19	77	32	107	58	653	98	872	207	1,079
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	113	87	29	445	62	584	142	1,523	171	2,639	404	3,043
Electric light and power works	269	23	7	62	26	48	19	1,042	35	1,175	87	1,262
Gas works	41	7	...	14	...	29	...	1,211	...	1,261	...	1,261
Lamps and gas mantles	2	5	...	5	46	4	43	21	21	35	104	139
Hydraulic power	1	...	...	...	...	...	...	9	...	9	...	9
Coke works	11	5	1	5	...	11	...	218	7	239	8	247
Total, Class 17	437	127	37	531	128	676	204	4,024	234	5,358	603	5,961
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy Leather	9	22	34	28	30	18	24	174	53	242	141	383
Leather belting	6	8	...	4	...	6	...	60	...	78	...	78
Portmanteaux	9	19	11	36	13	33	28	148	17	236	69	305
Other Minor Works	30	25	41	24	50	37	72	125	81	211	244	455
Total, Class 18	54	74	86	92	93	94	124	507	151	767	454	1,221
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting	8	1	...	2	...	6	...	22	1	31	1	32
Brooms, brushes	34	27	20	31	40	29	51	174	37	261	148	409
Florists and seedsmen	6	2	11	3	14	...	8	19	10	24	43	67
Laundries—European	151	7	85	23	271	33	359	244	1,052	397	1,767	2,074
Chinese	22	...	...	1	...	1	...	24	1	26	1	27
Rubber goods	8	34	32	60	55	123	121	990	446	1,207	654	1,861
Toys	15	8	...	15	1	13	6	41	7	77	14	91
Painting and sign-writing	16	3	1	24	1	49	3	772	2	848	7	855
Other Minor Works	32	38	34	57	57	75	47	329	1,008	493	1,146	1,645
Total, Class 19	292	120	183	216	439	329	595	2,615	2,564	3,280	3,781	7,061
Total, All Industries	11,421	3,915	5,338	8,970	7,722	11,922	9,300	81,170	20,261	105,977	42,621	148,598

Appendix II.

Factories, by Number of Persons employed—1924-1928.

Year	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																	
1924	3,246	1,756	822	349	187	197	96	48	61	43	29	11	6	9	4	4	6,868
1925	3,310	1,738	828	353	187	198	106	59	73	32	29	8	8	8	5	5	6,947
1926	2,970	1,841	851	383	217	219	123	58	82	31	32	9	7	7	4	3	6,837
1927	3,043	1,790	843	375	235	236	118	72	64	39	27	16	3	11	2	3	6,877
1928	3,028	1,837	850	374	237	218	105	68	71	33	16	17	5	10	3	4	6,876
Newcastle District.																	
1924	758	300	77	39	6	14	2	3	3	4	1	1	1	1	...	1	1,211
1925	784	295	95	29	15	10	4	3	3	1	1	2	...	1	1	1	1,245
1926	755	298	100	23	18	7	7	1	2	2	...	1	2	...	...	1	1,217
1927	723	280	81	28	12	8	2	2	5	2	1	..	1	...	1	1	1,147
1928	748	291	82	23	14	8	2	2	3	4	1	...	1	1	...	1	1,181
Rest of State.																	
1924	2,415	816	184	30	9	10	4	1	4	2	1	1	...	3	...	...	3,480
1925	2,616	786	177	33	9	6	4	2	3	2	2	1	...	2	1	...	3,644
1926	2,618	882	207	34	10	6	5	3	3	2	3	1	...	...	1	...	3,775
1927	2,317	842	170	28	10	5	2	2	4	3	3	...	2	1	...	...	3,389
1928	2,313	839	159	20	6	10	2	2	6	2	2	...	2	...	1	...	3,364
State.																	
1924	6,419	2,872	1,083	418	202	221	102	52	68	49	31	13	7	13	4	5	11,559
1925	6,710	2,819	1,100	415	211	214	114	64	79	35	32	11	8	11	7	6	11,836
1926	6,343	3,021	1,158	440	245	232	135	62	87	35	35	11	9	7	5	4	11,829
1927	6,083	2,912	1,094	431	257	249	122	76	73	44	31	16	6	12	3	4	11,413
1928	6,089	2,967	1,091	417	257	236	109	72	80	39	19	17	8	11	4	5	11,421

Appendix III.

Factories, by Class and Number of Persons employed, 1928.

Class of Factory.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																	
I. Treating raw material, product of pastoral pursuits	37	31	19	3	5	4	3	1	1	2	...	...	...	...	...	...	106
II. Oils and fats—animal, vegetable, &c.	...	4	2	3	1	4	2	1	...	1	...	...	...	...	...	...	18
III. Processes relating to stone, clay, glass, &c. ...	36	67	39	27	24	22	5	3	2	1	4	...	...	1	...	...	231
IV. Working in wood	191	131	54	9	12	10	4	3	2	2	1	...	...	...	...	...	419
V. Metal works, machinery, &c.	257	207	126	50	32	27	13	12	11	5	1	2	1	2	1	...	747
VI. Connected with food and drink, &c.	1,063	275	88	33	23	19	9	9	11	2	1	3	1	4	1	1	1,543
VII. Clothing and textile fabrics, &c.	722	440	213	104	73	64	36	21	23	10	6	5	2	2	...	1	1,722
VIII. Books, paper, printing, engraving, &c.	129	139	79	50	18	17	8	6	6	6	1	4	...	...	...	...	463
IX. Musical instruments, &c.	3	5	10	4	3	1	...	...	...	...	...	1	...	...	...	...	27
X. Arms and explosives	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XI. Vehicles and fittings, saddlery, harness, &c. ...	207	157	50	17	5	11	8	1	3	...	...	1	1	...	...	...	461
XII. Ship and boat building, &c.	11	8	6	4	...	...	1	1	...	...	...	...	...	...	...	...	31
XIII. Furniture, bedding, &c.	122	130	55	25	14	11	6	4	3	...	...	...	...	...	...	...	370
XIV. Drugs, chemicals, and by-products	24	45	20	5	2	7	3	...	4	1	1	...	...	...	...	...	112
XV. Surgical and other scientific instruments	25	12	4	2	...	...	...	...	...	...	...	...	...	...	...	...	43
XVI. Jewellery and plated-ware, &c.	56	31	13	7	2	...	2	...	...	...	...	...	...	...	...	...	111
XVII. Heat, light and power	73	40	20	9	7	10	1	3	4	1	...	...	...	1	1	...	170
XVIII. Leatherware (excepting saddlery and harness) ...	8	21	7	7	5	...	1	2	...	2	...	...	...	...	...	...	53
XIX. Minor wares not elsewhere included	64	91	45	15	11	11	3	1	1	...	1	1	...	...	...	2	246
Total	3,028	1,837	850	374	237	218	105	68	71	33	16	17	5	10	3	4	6,876
Newcastle District.																	
I. Treating raw material, product of pastoral pursuits	12	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14
II. Oils and fats—animal, vegetable, &c.	1	5	1	...	...	1	...	...	...	...	...	...	...	...	...	...	8
III. Processes relating to stone, clay, glass, &c. ...	26	12	11	4	2	...	...	...	...	...	...	...	...	...	...	...	55
IV. Working in wood	94	43	19	2	2	...	...	...	...	...	...	...	...	...	...	...	100
V. Metal work, machinery, &c.	27	21	7	5	2	1	...	...	2	2	1	...	1	1	...	1	71
VI. Connected with food and drink, &c.	360	59	17	3	1	1	...	1	1	1	...	...	...	...	...	...	444
VII. Clothing and textile fabrics, &c.	65	49	11	6	4	...	...	1	...	...	...	...	...	...	...	...	136
VIII. Books, paper, printing, engraving, &c.	14	22	2	2	2	2	...	...	...	...	...	...	...	...	...	...	44
IX. Musical instruments, &c.	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XI. Vehicles and fittings, saddlery, harness, &c. ...	79	46	5	...	1	...	...	...	...	...	...	...	...	...	...	...	131
XII. Ship and boat building, &c.	5	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7
XIII. Furniture, bedding, &c.	13	13	4	...	...	...	1	...	...	...	...	...	...	...	...	...	31
XIV. Drugs, chemicals, and by-products	3	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XV. Surgical and other scientific instruments	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XVI. Jewellery and plated-ware, &c.	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
XVII. Heat, light and power	38	10	2	1	...	1	1	...	...	1	...	...	...	...	...	...	54
XVIII. Leatherware (excepting saddlery and harness) ...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XIX. Minor wares, n.e.i.	5	3	2	...	...	2	...	...	...	...	...	...	...	...	...	...	12
Total	748	291	82	23	14	8	2	2	3	4	1	...	1	1	...	1	1,181

Appendix III—*continued.*

Class of Factory.	Number of Factories in which the number of persons employed is—															Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750	750 and under 1,000.	1,000 and over.	
REST OF STATE.																
I. Treating raw material, product of pastoral pursuits	27	35	3	1	1	...	...	...	...	...	...	...	...	...	...	67
II. Oils and fats—animal, vegetable, &c.	7	2	...	...	...	...	...	...	...	...	...	...	...	...	...	9
III. Processes relating to stone, clay, glass, &c. ...	35	48	12	2	...	3	...	...	...	1	1	...	1	...	...	103
IV. Working in wood	257	152	54	4	1	2	...	...	...	...	...	...	...	...	...	470
V. Metal work, machinery, &c.	55	44	2	...	2	...	...	...	1	...	...	...	1	...	1	106
VI. Connected with food and drink, &c.	1,169	158	27	4	...	1	...	1	3	...	...	...	...	...	...	1,364
VII. Clothing and textile fabrics, &c.	138	99	11	1	...	1	2	1	1	1	1	...	...	...	...	255
VIII. Books, paper, printing, engraving, &c.	78	59	11	3	...	2	...	...	...	...	...	...	...	...	...	153
IX. Musical Instruments, &c.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XI. Vehicles and fittings, saddlery, harness, &c. ...	346	185	17	1	...	...	...	...	...	...	...	...	...	...	...	549
XII. Ship and boat building, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XIII. Furniture, bedding, &c.	25	7	1	...	...	...	...	...	...	...	...	...	...	...	...	33
XIV. Drugs, chemicals, and by-products	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	2
XV. Surgical and other scientific instruments	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	4
XVI. Jewellery and plated-ware, &c.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XVII. Heat, light and power	156	39	13	3	1	1	...	...	...	...	...	...	...	...	...	213
XIX. Minor wares, n.e.i.	15	10	7	1	1	...	...	...	...	...	...	...	...	...	...	34
Total	2,313	839	159	20	6	10	2	2	6	2	2	...	2	...	1	... 3,364
STATE.																
I. Treating raw materials, product of pastoral pursuits	76	68	22	4	6	4	3	1	1	2	...	...	...	...	...	187
II. Oils and fats—animal, vegetable, &c.	8	11	3	3	1	5	2	1	...	1	...	...	...	...	...	35
III. Processes in stone, clay, glass, &c.	97	127	62	33	26	25	5	3	2	2	5	...	1	1	...	389
IV. Working in wood	542	326	127	15	15	12	4	3	2	2	1	...	...	...	...	1,049
V. Metal works, machinery, &c.	339	272	135	55	36	28	13	12	14	7	2	2	3	3	2	1 924
VI. Connected with food and drink, &c.	2,592	492	132	40	24	21	9	11	15	3	2	3	1	4	1	1 3,351
VII. Clothing and textile fabrics, &c.	925	588	235	111	77	65	38	23	24	11	6	5	2	2	...	1 2,113
VIII. Books, paper, printing, and engraving, &c. ...	221	220	92	55	20	21	8	6	6	6	1	4	...	...	...	... 660
IX. Musical instruments, &c.	4	5	11	4	3	1	...	...	...	...	...	1	...	...	...	... 29
X. Arms and explosives	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	... 3
XI. Vehicles and fittings, saddlery and harness, &c. ...	632	388	72	18	6	11	8	1	3	...	...	1	1	...	...	... 1,141
XII. Ship and boat building, &c.	16	10	6	4	...	...	1	1	...	...	...	...	...	...	...	... 38
XIII. Furniture, bedding, &c.	160	150	60	25	14	11	7	4	3	...	...	...	...	...	...	... 434
XIV. Drugs, chemicals, and by-products	27	47	21	5	2	7	3	...	5	1	1	...	...	...	...	... 119
XV. Surgical and other scientific instruments	31	13	4	2	...	...	...	...	...	...	...	...	...	...	...	... 50
XVI. Jewellery and plated-ware, &c.	59	33	13	7	2	...	2	...	...	...	...	...	...	...	...	... 116
XVII. Heat, light, and power	267	89	35	13	8	12	2	3	4	2	...	...	...	1	1	... 437
XVIII. Leatherware, n.e.i.	9	21	7	7	5	...	1	2	...	2	...	...	...	...	...	... 54
XIX. Minor wares, n.e.i.	84	104	54	16	12	13	3	1	1	...	1	1	...	...	...	2 292
Total	6,089	2,967	1091	417	257	236	109	72	80	39	19	17	8	11	4	5 11,421

Appendix IV.

Persons employed, by Class of Factory, Classified by Industry—1928.

METROPOLITAN DISTRICT.

Class of Factory.	Number of Factories on Register.	Persons employed.									
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 1.—TREATING RAW MATERIAL, THE PRODUCT OF PASTORAL PURSUITS.												
(a) *Animal Products.*												
Boiling-down and tallow-refining	5	1	...	2	...	...	...	69	...	72	...	72
Glue	2	...	...	1	10	5	33	96	22	102	65	167
Tanning	55	8	...	27	...	37	1	622	2	694	3	697
Wool-scouring and fellmongering	20	2	...	23	3	32	37	494	24	551	64	615
Other animal products	6	24	...	24	...	19	...	97	...	164	...	164
Total	88	35	...	77	13	93	71	1,378	48	1,583	132	1,715
(b) *Vegetable Products.*												
Chaff-cutting	18	...	...	2	...	1	...	35	...	38	...	38
Total, Class 1	106	35	...	79	13	94	71	1,413	48	1,621	132	1,753
CLASS 2.—OILS AND FATS—ANIMAL AND VEGETABLE.												
Oil and grease	6	6	...	15	...	18	...	137	...	176	...	176
Soap, candles, &c.	12	28	28	25	54	41	55	281	67	375	204	579
Total, Class 2	18	34	28	40	54	59	55	418	67	551	204	755

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.												
Asphalt	17	1	...	13	...	21	...	93	...	128	...	128
Bricks and tiles	66	138	6	200	4	205	8	2,220	31	2,763	49	2,812
Glass and glass bottles	11	55	3	82	8	101	6	879	4	1,117	21	1,138
Glass (ornamental)	32	22	...	62	...	71	2	318	1	473	3	476
Lime, plaster, and cement	6	11	...	13	...	22	...	235	...	281	...	281
Marble and slate	14	2	...	6	...	14	...	199	...	221	...	221
Modelling and fibrous plaster	28	3	...	24	...	32	...	172	...	231	...	231
Monumental masonry	18	...	...	11	...	29	...	208	...	248	...	248
Pottery and earthenware	10	62	...	51	...	43	...	295	...	451	...	451
Stone-dressing	16	1	...	3	...	10	...	154	2	168	2	170
Other works	13	1	...	5	...	23	...	138	...	167	...	167
Total, Class 3	231	296	9	470	12	571	16	4,911	38	6,248	75	6,323
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	1	...	...	...	...	...	...	2	...	2	...	2
Boxes and packing-cases	50	15	...	30	...	56	4	632	4	733	8	741
Cooperage	8	2	...	22	...	12	...	195	...	231	...	231
Joinery	227	50	1	258	3	351	8	2,306	4	2,965	16	2,981
Saw-milling—Timber	66	10	...	123	11	146	7	1,078	1	1,357	19	1,376
Firewood	29	...	...	5	...	3	...	49	...	57	...	57
Wood-turning	14	6	...	12	...	10	2	59	4	87	6	93
Other works	24	8	7	20	7	38	2	185	13	251	29	280
Total, Class 4	419	91	8	470	21	616	23	4,506	26	5,683	78	5,761
CLASS 5.—METAL WORKS, MACHINERY, &c.												
Agricultural implements	9	2	...	14	...	21	...	159	...	196	...	196
Brass and copper	73	40	1	101	3	145	5	728	5	1,014	14	1,028
Cutlery	29	7	5	14	4	20	1	170	...	211	10	221
Engineering	281	254	9	674	24	826	25	4,884	22	6,638	80	6,718
Galvanised iron	40	28	...	110	...	151	...	660	...	949	...	949
Iron works, foundries, and boilermaking	140	74	...	233	...	397	1	4,496	4	5,200	5	5,205
Iron safes and doors	5	6	...	9	...	4	...	36	...	55	...	55
Lead-mills	2	...	...	1	...	...	...	6	...	7	...	7
Railway carriage works	3	14	...	30	...	56	...	480	4	580	4	584
Smelting and ore dressing	2	...	...	...	...	...	...	33	15	33	15	48
Stoves and ovens	10	27	10	35	8	518	12	71	27	651	57	708
Tinsmithing	22	97	37	148	71	169	99	519	146	933	353	1,286
Wire-working	22	36	...	50	...	151	...	920	...	1,157	...	1,157
Other metal works	86	159	12	191	25	211	27	1,007	20	1,568	84	1,652
Plumbing	14	3	1	12	...	20	3	207	5	242	9	251
Farriery	9	...	...	1	...	1	...	20	...	22	...	22
Total, Class 5	747	747	75	1,623	135	2,690	173	14,396	248	19,456	631	20,087
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(a) *Animal Food.*												
Bacon	7	...	...	3	...	14	...	135	...	152	...	152
Butchers' smallgoods	575	10	...	33	...	47	1	846	5	936	6	942
Margarine	3	1	1	4	1	26	...	125	1	156	3	159
Meat-preserving	8	10	1	24	11	19	11	448	61	501	84	585
Total	593	21	2	64	12	106	12	1,554	67	1,745	93	1,838
(b) *Vegetable Foods, including Products not Food but usually connected with the manufacture of Foods.*												
Biscuits	10	151	233	163	242	103	238	346	328	763	1,041	1,804
Broad and pastry	527	58	11	292	30	274	38	1,560	180	2,184	259	2,443
Confectionery	122	81	283	112	422	123	434	763	449	1,079	1,588	2,667
Corn-flour and oatmeal	14	15	19	17	31	21	51	164	54	217	155	372
Flour-milling	17	1	1	4	2	35	2	365	2	405	7	412
Jam and fruit preserving	21	4	4	14	23	26	23	143	102	187	152	339
Pickles, sauces, and vinegar	6	1	...	8	1	21	3	64	31	94	35	129
Poultry foods and dog biscuits	9	4	...	8	...	8	...	62	...	82	...	82
Self-raising flour	4	3	10	2	17	5	15	11	13	21	55	76
Sugar-refining	1	2	1	1	...	10	7	296	4	309	12	321
Total	731	320	562	621	768	626	811	3,774	1,163	5,341	3,304	8,645
(c) *Drinks and Stimulants.*												
Aerated waters and cordials	33	3	1	53	12	63	14	226	36	345	63	408
Brewing	9	1	15	15	18	41	28	955	19	1,012	80	1,092
Condiments, coffee, spices, &c.	36	20	72	28	109	39	164	287	240	374	585	959
Distillery	2	...	...	...	...	1	...	51	...	52	...	52
Ice and refrigerating	99	12	3	27	6	2	19	481	26	552	54	606
Tea blending and packing	12	20	15	5	24	6	22	39	15	70	76	146
Wine, spirits, and beer bottling	20	1	...	14	...	39	14	236	48	290	62	352
Total	211	57	106	142	169	221	261	2,275	384	2,695	920	3,615
(d) *Narcotics.*												
Tobacco, cigars, and cigarettes	8	51	161	33	262	82	317	679	669	845	1,409	2,254
Total, Class 6	1,543	449	831	860	1,211	1,035	1,401	8,282	2,283	10,626	5,726	16,352

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males	Females.	Males.	Females.	Total.
Class 7.—Clothing and Textile Fabrics, and Fibrous Materials.												
(a) *Textile.*												
Woollen mills...	22	121	209	137	245	138	372	686	889	1,082	1,715	2,797
(b) *Dress.*												
Boots and shoes—Order made	543	23	10	47	16	53	13	773	31	896	70	966
Factory made	84	167	289	299	283	141	298	1,819	957	2,426	1,827	4,253
Clothing—Men's slops	42	18	222	37	326	53	376	322	1,028	430	1,952	2,382
Women's slops	153	15	309	21	395	27	441	179	1,366	242	2,511	2,753
Tailoring	177	29	252	54	379	66	433	775	1,595	924	2,659	3,583
Corsets	6	1	66	3	132	2	176	13	254	19	628	647
Dressmaking and millinery—												
Makers' material	223	15	525	21	673	33	792	142	1,574	211	3,564	3,775
Customers' material	101	...	59	...	79	...	79	10	202	10	419	429
Dye works	25	7	2	16	24	22	40	169	98	214	164	378
Furriery	32	16	4	32	50	41	68	124	104	213	226	439
Hats and caps	23	23	84	41	144	51	150	259	298	374	676	1,050
Hosiery and knitting	65	52	409	90	532	165	706	414	1,157	721	2,804	3,525
Oilskin and waterproof clothing	9	...	16	3	19	3	27	25	74	31	136	167
Shirts, ties, and scarves	50	8	267	25	346	20	383	83	747	136	1,743	1,879
Umbrellas	5	2	7	5	19	3	30	23	62	33	118	151
Underclothing	122	10	381	12	416	20	440	101	729	143	1,966	2,109
Wigs and hair work	6	1	3	...	2	3	5	16	8	20	18	38
Total	1,666	387	2,905	706	3,835	703	4,457	5,247	10,284	7,043	21,481	28,524
(c) *Fibrous Materials and Textiles not elsewhere included.*												
Bags and sacks	10	12	36	19	42	29	36	137	84	197	198	395
Rope and twine	9	16	11	56	24	30	22	81	17	183	74	257
Tents and tarpaulins	15	8	17	10	19	8	29	55	100	81	165	246
Total	34	36	64	85	85	67	87	273	201	461	437	898
Total, Class 7 ...	1,722	544	3,178	928	4,165	908	4,916	6,206	11,374	8,586	23,633	32,219
Class 8.—Books, Paper, Printing, Engraving.												
Die-sinking and engraving	23	13	2	35	2	65	5	190	3	303	12	315
Electrotyping and stereotyping, type founding, and printers' materials	12	3	1	7	2	14	6	142	6	166	15	181
Paper bags and boxes	17	77	174	54	207	72	233	237	284	440	898	1,338
Paper mills, cardboard, and strawboard ...	7	18	13	28	31	15	27	124	71	185	142	327
Photo-engraving, photo-lithography, and photo. materials	43	9	39	15	49	25	88	108	227	157	403	560
Printing, bookbinding, and manufacturing stationery	361	275	251	504	402	609	428	3,908	826	5,296	1,907	7,203
Total, Class 8	463	395	480	643	693	800	787	4,709	1,417	6,547	3,377	9,924
Class 9.—Musical Instruments, &c.												
Pianos, organs, and sewing machines ...	27	15	6	47	9	92	21	506	42	660	78	738
Class 10.—Arms and Explosives.												
Explosives	3	2	...	2	3	1	2	5	1	10	6	16
Class 11.—Vehicles and Fittings, Saddlery, Harness, &c.												
Coaches and waggons	39	7	...	35	...	50	...	273	1	365	1	366
Cycles and motor cars	406	155	...	539	1	693	3	3,079	43	4,466	47	4,513
Perambulators, &c.	5	7	...	7	...	8	...	62	1	84	1	85
Saddlery, harness, &c.	16	3	6	2	2	3	3	81	31	89	42	131
Naves, spokes, &c.	...	...	...	...	...	...	...	...	...	...	...	...
Whips	1	...	...	...	...	1	...	3	...	4	...	4
Total, Class 11	461	172	6	583	3	755	6	3,498	76	5,008	91	5,099
Class 12.—Shipbuilding Fittings, &c.												
Docks and slips	1	...	...	1	...	...	...	1	...	2	...	2
Sailmaking	6	...	2	2	...	4	...	13	3	19	5	24
Ship and boat building	24	2	...	24	...	49	...	364	...	439	...	439
Total, Class 12	31	2	2	27	...	53	...	378	3	460	5	465

Appendix IV—*continued*.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 13.—FURNITURE, BEDDING, &c.												
Bedding, flock, and upholstery	82	45	46	86	93	115	101	584	305	830	545	1,375
Carpet-sewing	3	...	4	4	3	5	7	43	33	52	47	99
Iron bedsteads	3	6	1	6	3	10	2	91	17	113	23	136
Billiard tables	...	...	...	...	...	...	...	...	...	...	...	...
Chair-making	12	7	1	18	...	30	1	140	...	195	2	197
Furniture and cabinet-making—												
European	211	82	5	242	4	402	8	1,996	11	2,722	28	2,750
Chinese	12	...	...	...	...	...	...	54	...	54	...	54
Bamboo and wicker	11	8	...	10	...	35	2	135	1	188	3	191
Picture frames	25	6	2	21	5	13	14	88	34	128	55	183
Window blinds	11	11	2	12	3	12	3	77	7	112	15	127
Total, Class 13	370	165	61	399	111	622	138	3,208	408	4,394	718	5,112
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c.	18	16	19	20	37	17	64	125	82	178	202	380
Chemical works and drugs	58	56	46	56	98	48	102	391	164	551	410	961
Fertilisers	2	...	...	1	...	...	...	18	...	19	...	19
Perfumes and essences	12	11	42	21	48	13	47	66	50	111	187	298
Paints and varnishes	17	36	21	49	10	55	16	390	23	530	70	600
Other minor works	5	3	...	8	1	2	1	65	...	78	2	80
Total, Class 14 ..	112	122	128	155	194	135	230	1,055	319	1,467	871	2,338
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	29	2	...	11	...	27	...	94	...	134	...	134
Surgical instruments...	9	4	2	...	...	4	3	40	5	48	10	58
Other minor works	5	...	...	4	...	1	...	9	...	14	...	14
Total, Class 15	43	6	2	15	...	32	3	143	5	196	10	206
CLASS 16.—TIMEPIECES, JEWELLERY, AND PLATED WARE.												
Electroplating	31	11	12	39	14	44	29	243	39	337	94	431
Jewellery	80	23	7	38	18	62	29	398	59	521	113	634
Total, Class 16	111	34	19	77	32	106	58	641	98	858	207	1,065
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	107	87	29	411	62	550	142	1,401	171	2,449	404	2,853
Electric light and power works	47	2	7	11	16	6	12	423	28	442	63	505
Gas works	7	7	...	12	...	24	...	943	...	986	...	986
Lamps and gas mantles	2	5	...	5	40	4	43	21	21	35	104	139
Hydraulic power	1	...	...	...	...	...	...	9	...	9	...	9
Coke works	6	...	1	3	...	2	...	82	7	87	8	95
Total, Class 17	170	101	37	442	118	586	197	2,879	227	4,008	579	4,587
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy leather	9	22	34	28	30	18	24	174	53	242	141	383
Leather belting	5	8	...	4	...	6	...	59	...	77	...	77
Portmanteaux	9	19	11	36	13	33	28	148	17	236	69	305
Other minor works	30	25	41	24	50	37	72	125	81	211	244	455
Total, Class 18	53	74	86	92	93	94	124	506	151	766	454	1,220
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting ...	8	1	...	2	...	6	...	22	1	31	1	32
Brooms, brushes	29	27	20	29	40	29	51	163	37	248	148	396
Florists and seedsmen	6	2	11	3	14	...	8	19	10	24	43	67
Laundries—European	124	5	66	19	191	25	293	205	962	254	1,512	1,766
Chinese	14	...	...	1	...	1	...	16	1	18	1	19
Rubber goods	7	33	32	60	55	122	121	988	446	1,203	654	1,857
Toys	13	8	...	15	1	13	6	39	7	75	14	89
Painting and signwriting	14	3	1	21	1	45	3	710	2	779	7	786
Other minor works	31	35	34	47	57	63	47	319	1,608	464	1,146	1,610
Total, Class 19	246	114	164	197	359	304	529	2,481	2,474	3,096	3,526	6,622
Total, All Industries ...	6,876	3,398	5,120	7,149	7,226	9,553	8,750	60,141	19,305	80,241	40,401	120,642

Appendix V.

Persons employed, by Class of Factory—1924-28.

Class of Factory.	1924.	1925.	1926.	1927.	1928.
Metropolitan District.					
I. Treating raw material, product of pastoral pursuits	1,959	2,068	2,231	2,334	1,753
II. Oils and fats—animal, vegetable, &c.	696	616	770	750	755
III. Processes relating to stone, clay, glass, &c.	5,801	6,272	6,757	6,497	6,323
IV. Working in wood	5,063	5,046	5,750	5,445	5,761
V. Metal works, machinery, &c.	17,445	18,154	21,028	19,560	20,087
VI. Connected with food and drink, &c.	14,731	14,416	15,650	16,758	16,352
VII. Clothing and textile fabrics, &c.	27,600	29,207	32,694	32,215	32,219
VIII. Books, paper, printing, engraving, &c.	8,914	9,107	9,772	10,209	9,924
IX. Musical instruments, &c.	678	695	929	713	738
X. Arms and explosives	31	23	24	18	16
XI. Vehicles and fittings, saddlery, harness, &c.	4,457	4,950	5,528	4,771	5,099
XII. Ship and boat building, &c.	1,073	960	916	974	465
XIII. Furniture, bedding, &c.	5,035	5,238	5,576	5,566	5,112
XIV. Drugs, chemicals, and by-products	2,206	2,352	2,523	2,521	2,338
XV. Surgical and other scientific instruments	182	236	228	213	206
XVI. Jewellery and plated-ware, &c.	980	946	895	890	1,065
XVII. Heat, light, and power	3,475	3,527	3,943	4,274	4,587
XVIII. Leatherware (excepting saddlery and harness)	1,048	1,178	1,330	1,118	1,220
XIX. Minor wares, n.e.i.	4,399	4,833	5,439	5,105	6,622
Total	105,773	109,824	121,933	119,931	120,642
Newcastle District.					
I. Treating raw material, product of pastoral pursuits	196	175	193	216	39
II. Oils and fats—animal, vegetable, &c.	179	150	167	139	92
III. Processes relating to stone, clay, glass, &c.	480	525	564	565	485
IV. Working in wood	1,457	1,430	1,193	1,062	953
V. Metal works, machinery, &c.	6,209	5,927	6,379	6,167	5,859
VI. Connected with food and drink, &c.	1,361	1,354	1,549	1,522	1,659
VII. Clothing and textile fabrics, &c.	1,104	1,066	1,108	972	917
VIII. Books, paper, printing, engraving, &c.	342	351	348	408	414
IX. Musical instruments, &c.	10	11	10	13	11
XI. Vehicles and fittings, saddlery, harness, &c.	394	472	514	482	510
XII. Ship and boat building, &c.	39	47	46	30	27
XIII. Furniture, bedding, &c.	243	249	249	256	220
XIV. Drugs, chemicals, and by-products	128	124	61	53	68
XV. Surgical and other scientific instruments	4	6	6	3	5
XVI. Jewellery and plated-ware, &c.	13	10	25	11	12
XVII. Heat, light and power	800	724	505	617	616
XVIII. Leatherware (excepting saddlery and harness)	...	...	...	...	1
XIX. Minor wares, n.e.i.	144	148	104	139	194
Total	13,103	12,769	13,021	12,655	12,082
Rest of State.					
I. Treating raw material, product of pastoral pursuits	386	483	471	432	348
II. Oils and fats—animal, vegetable, &c.	27	25	25	23	27
III. Processes relating to stone, clay, glass, &c.	1,699	1,785	1,342	1,458	1,591
IV. Working in wood	2,563	2,648	2,928	2,554	2,352
V. Metal work, machinery, &c.	2,467	2,491	2,440	2,536	2,065
VI. Connected with food and drink, &c.	3,499	3,498	3,435	3,675	3,890
VII. Clothing and textile fabrics, &c.	1,606	1,519	1,809	1,726	1,612
VIII. Books, paper, printing, engraving, &c.	738	741	860	842	781
IX. Musical Instruments, &c.	...	...	...	...	2
XI. Vehicles and fittings, saddlery, harness, &c.	1,597	1,677	1,964	1,795	1,905
XII. Ship and boat building, &c.	.....	1	8	1	.....
XIII. Furniture, bedding, &c.	141	152	162	133	105
XIV. Drugs, chemicals, and by-products	75	67	59	70	123
XV. Surgical and other scientific instruments	1	1	1	2	8
XVI. Jewellery and plated-ware, &c.	10	3	6	5	2
XVII. Heat, light and power	838	806	885	894	758
XIX. Minor wares, n.e.i.	193	197	223	226	245
Total	15,840	16,094	16,618	16,372	15,874
State.					
I. Treating raw material, product of pastoral pursuits	2,541	2,726	2,895	2,982	2,140
II. Oils and fats—animal, vegetable, &c.	902	791	962	912	874
III. Processes relating to stone, clay, glass, &c.	7,980	8,582	8,663	8,520	8,399
IV. Working in wood	9,083	9,124	9,871	9,061	9,066
V. Metal work, machinery, &c.	26,121	26,572	29,847	28,263	28,011
VI. Connected with food and drink, &c.	19,591	19,268	20,634	21,955	21,901
VII. Clothing and textile fabrics, &c.	30,310	31,792	35,611	34,913	34,748
VIII. Books, paper, printing, engraving, &c.	9,994	10,199	10,980	11,459	11,119
IX. Musical instruments, &c.	688	706	939	726	751
X. Arms and explosives	31	23	24	18	16
XI. Vehicles and fittings, saddlery, harness, &c.	6,448	7,099	8,006	7,048	7,574
XII. Ship and boat building, &c.	1,112	1,008	970	1,005	492
XIII. Furniture, bedding, &c.	5,419	5,639	5,987	5,955	5,437
XIV. Drugs, chemicals, and by-products	2,409	2,543	2,643	2,644	2,529
XV. Surgical and other scientific instruments	187	243	235	218	219
XVI. Jewellery and plated-ware, &c.	1,003	959	926	906	1,079
XVII. Heat, light, and power	5,113	5,057	5,333	5,785	5,961
XVIII. Leatherware (excepting saddlery and harness)	1,048	1,178	1,330	1,118	1,221
XIX. Minor wares, n.e.i.	4,736	5,178	5,766	5,470	7,061
Total	134,716	138,687	151,622	148,958	148,598

Appendix VI.

Persons employed, by Age Groups—1924-1928.

Metropolitan District.

Year.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		Over 21 years		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1924	6,868	2,949	3,893	6,166	6,100	7,753	7,794	54,774	16,344	71,642	34,131	105,773
1925	6,947	3,044	4,260	6,368	6,555	7,948	7,961	56,736	16,952	74,096	35,728	109,824
1926	6,837	3,666	4,801	7,076	7,268	9,102	9,007	62,674	18,389	82,518	39,465	121,983
1927	6,877	3,462	4,979	7,156	7,387	9,055	8,855	60,723	18,314	80,396	39,535	119,931
1928	6,876	3,398	5,120	7,149	7,226	9,553	8,750	60,141	19,305	80,241	40,401	120,642

Newcastle District.

1924	1,211	173	107	786	271	946	360	10,016	444	11,921	1,182	13,103
1925	1,245	201	132	830	225	979	335	9,608	459	11,618	1,151	12,769
1926	1,217	247	158	829	272	918	365	9,758	474	11,752	1,269	13,021
1927	1,147	239	141	808	234	1,031	297	9,483	422	11,561	1,094	12,655
1928	1,181	190	96	786	234	1,031	272	9,010	463	11,017	1,065	12,082

Rest of State.

1924	3,480	294	98	915	238	1,126	265	12,404	500	14,739	1,101	15,840
1925	3,644	312	94	954	197	1,188	255	12,603	491	15,057	1,037	16,094
1926	3,775	337	136	1,061	241	1,254	309	12,728	552	15,380	1,238	16,618
1927	3,389	391	155	1,139	290	1,424	322	12,107	544	15,061	1,311	16,372
1928	3,364	327	122	1,035	262	1,338	278	12,019	493	14,719	1,155	15,874

State.

1924	11,559	3,416	4,098	7,867	6,609	9,825	8,419	77,194	17,288	98,302	36,414	134,716
1925	11,836	3,557	4,486	8,152	6,977	10,115	8,551	78,947	17,902	100,771	37,916	138,687
1926	11,829	4,250	5,095	8,966	7,781	11,274	9,681	85,160	19,415	109,650	41,972	151,622
1927	11,413	4,092	5,275	9,103	7,911	11,510	9,474	82,313	19,280	107,018	41,940	148,958
1928	11,421	3,915	5,338	8,970	7,722	11,922	9,300	81,170	20,261	105,977	42,621	148,598

Appendix VII.

Horse-power of Machinery, by Class of Factory and Method of Production, Classified by Industry, 1928.

METROPOLITAN DISTRICT.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 1.—TREATING RAW MATERIALS, &c.									
Boiling-down and tallow refining	5	69	61	...	...	...	3	243	171
Glue	1	28	28	...	...	...	2	401	401
Tanning	9	339	163	6	200	136	52	2,611	1,988
Woolscouring and fellmongering and packing skins	9	689	467	...	...	...	24	2,238	1,664
Chaff-cutting	...	...	...	1	20	15	17	463	418
Total	24	1,125	719	7	220	151	98	5,956	4,642
CLASS 2.—OILS AND FATS.									
Oil and grease	1	27	27	...	...	...	6	650	517
Soap and candles	7	851	356	...	...	...	9	1,901	1,537
Total	8	878	383	...	...	...	15	2,551	2,054
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.									
Asphalt	1	12	...	...	...	...	15	222	169
Bricks and tiles	16	2,795	1,886	5	341	259	58	9,288	7,666
Glass and glass bottles	2	704	652	...	...	...	8	1,577	1,478
Glass (ornamental)	2	67	37	1	4	2	20	243	233
Cement	...	...	...	1	160	...	6	571	258
Marble and slate	...	...	...	2	46	33	13	1,137	1,048
Modelling and fibrous plaster	...	...	...	...	...	...	14	110	101
Monumental masons	...	...	...	...	...	...	8	846	772
Pottery and earthenware	...	...	...	1	35	30	7	880	785
Stone-dressing	2	385	382	...	...	...	13	972	789
Other works	1	45	25	...	...	...	12	478	439
Total	24	4,008	2,982	10	586	324	174	16,324	13,738
CLASS 4.—WORKING IN WOOD.									
Incubators	...	...	...	...	...	...	1	3	3
Boxes and packing-cases	4	920	770	1	1	1	48	1,891	1,641
Cooperage	1	20	15	...	...	...	8	233	169
Joinery	6	666	497	13	150	111	210	4,608	3,498
Saw-milling—timber	24	4,548	3,329	...	...	...	52	8,366	6,173
firewood	13	194	150	2	24	18	15	122	114
Wood-turning	...	...	...	...	...	...	14	183	132
Other works	1	25	25	2	23	15	20	431	386
Total	49	6,373	4,786	18	198	145	368	15,837	12,116
CLASS 5.—METAL WORKS, MACHINERY, &c.									
Agricultural implements	...	...	...	3	98	68	7	304	254
Brass and copper	1	52	52	1	3	3	71	1,758	1,045
Cutlery	...	...	...	...	...	...	28	274	256
Engineering	14	5,370	4,091	12	168	94	269	12,222	8,746
Galvanised iron	1	6	6	2	100	58	31	510	420
Iron works, foundries, and boiler-making	6	1,391	669	7	103	75	128	16,747	3,969
Iron safes and doors	...	...	...	...	...	...	5	216	174
Lead-mills	...	...	...	...	...	...	2	27	22
Railway carriage works	2	240	175	...	...	...	3	643	284
Smelting and ore-dressing	...	...	...	...	...	...	2	140	103
Stoves and ovens	...	...	...	...	...	...	10	2,195	1,523
Tinsmithing	2	74	17	...	...	...	18	579	467
Wire-working	...	...	...	...	...	...	21	3,430	3,292
Other metal works	1	380	380	1	94	61	76	2,099	1,431
Plumbing	...	...	...	...	...	...	10	46	37
Farriery	...	...	...	...	...	...	8	15	11
Total	27	7,513	5,390	26	566	359	689	41,205	22,034
CLASS 6.—CONNECTED WITH FOOD AND DRINK, &c.									
Bacon	4	140	119	...	...	...	7	444	358
Butchers' small-goods	7	69	54	5	43	35	559	2,498	2,329
Margarine	1	25	20	2	30	18	3	444	412
Meat-preserving	3	648	605	...	...	...	8	1,846	1,695
Biscuits	2	158	133	...	...	...	9	1,676	660
Bread and pastry	9	38	21	13	197	161	294	2,150	1,878
Confectionery	5	2,411	1,187	...	...	...	78	4,714	3,236
Corn-flour and oatmeal	1	15	13	...	...	...	12	1,257	906
Flour-milling	2	1,090	836	...	...	...	17	2,835	2,521
Jam and fruit preserving	3	18	16	...	...	...	14	297	287
Pickles, sauces, and vinegar	3	80	52	...	...	...	3	445	323
Dog biscuits and poultry foods	...	...	...	1	188	188	9	418	418
Self-raising flour	...	...	...	...	...	...	3	110	92
Sugar refining	1	213	173	...	...	...	1	3,151	1,603
Aerated waters	3	30	28	2	15	11	26	636	550
Brewing	5	2,777	1,773	...	...	...	8	4,502	2,880
Condiments, Eastern goods, &c.	4	34	15	2	7	4	30	766	690
Distillery	...	...	...	1	10	...	2	494	206
Ice and refrigerating	11	2,199	1,398	12	1,186	961	59	6,119	5,184
Tea-blending	...	...	...	...	...	...	11	94	89
Wines and spirits	2	58	6	...	...	...	16	97	87
Tobacco, cigars, &c.	2	1,958	1,010	...	...	...	6	1,006	437
Total	68	11,961	7,459	38	1,676	1,378	1,175	35,999	26,841

Appendix VII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
Class 7.—Clothing and Textile Fabrics, &c.									
Woollen mills	4	674	628	...	...	...	20	5,893	481
Boots and shoes—order and repairing	1	1	1	4	15	14	526	887	702
factory made	1	122	113	1	75	75	82	1,444	1,314
Clothing—men's slops	2	113	75	3	114	76	42	397	360
women's slops	...	...	...	...	...	...	135	351	325
tailoring	...	...	...	...	...	...	80	295	278
Corsets	...	...	...	...	...	...	6	115	114
Dressmaking—makers' materials	3	81	49	...	...	...	98	524	488
customers' materials	...	...	...	...	...	...	40	48	45
Dye works	3	50	35	...	...	...	21	306	267
Furriery	1	4	4	...	...	...	24	209	172
Hats and caps	1	7	7	...	...	...	22	552	435
Hosiery, knitting, &c.	6	158	99	1	3	2	...	...	...
Oilskins and waterproof clothing	1	6	6	...	...	...	8	87	68
Shirts, ties, and scarves	1	6	4	1	17	...	48	550	502
Umbrellas	...	...	...	...	...	...	5	15	14
Underclothing	...	...	...	1	4	...	101	438	403
Wigs and hairwork	...	...	...	...	...	...	3	42	37
Bags and sacks	...	...	...	...	...	...	6	133	109
Rope and twine	...	...	...	...	...	...	7	669	649
Tents and tarpaulins	...	...	...	...	...	...	74	1,100	928
Total	24	1,222	1,021	11	228	167	1,348	14,055	7,691
Class 8.—Books, Paper, Printing, Engraving.									
Die-sinking and engraving	...	...	...	...	...	...	22	182	164
Electro and stereo-typing, printers' materials, &c.	...	...	...	...	...	...	12	302	254
Paper bags and boxes	...	...	...	...	...	...	14	218	178
Paper-mills	...	...	...	...	...	...	6	1,335	1,329
Photo.-engraving, photo. materials, &c.	1	3	3	...	...	...	14	163	147
Printing, bookbinding, and stationery	1	20	10	18	273	185	335	10,843	7,983
Total	2	23	13	18	273	185	403	13,043	10,055
Class 9.—Musical Instruments, &c.									
Pianos and sewing-machines	...	...	...	...	...	...	21	1,017	992
Class 10.—Arms and Explosives.									
Explosives	...	...	...	...	...	...	3	29	26
Class 11.—Vehicles, Saddlery, Harness, &c.									
Coaches and waggons	1	8	6	1	4	3	35	478	363
Cycles and motor-cars	6	124	94	9	51	37	379	4,127	3,472
Perambulators	...	...	...	...	...	...	4	16	15
Saddlery and harness	...	...	...	...	...	...	12	38	36
Naves and spokes	...	...	...	...	...	...	...	...	...
Whips	...	...	...	...	...	...	...	...	...
Total	7	132	100	10	55	40	430	4,659	3,886
Class 12.—Shipbuilding, &c.									
Docks and slips	...	...	...	...	...	...	1	25	15
Sailmaking	...	...	...	...	...	...	6	35	30
Ship and boat building	4	298	41	3	35	30	20	597	467
Total	4	298	41	3	35	30	27	657	512
Class 13.—Furniture, Bedding, &c.									
Bedding and flock	1	50	23	...	...	...	67	1,066	998
Carpet-sewing	...	...	...	1	27	12	2	29	28
Iron bedsteads	...	...	...	...	...	...	3	135	135
Billiard-tables	...	...	...	1	5	5	11	98	85
Chair-making	...	...	...	...	...	...	...	...	...
Furniture—European	3	34	19	3	46	43	203	4,412	3,725
Chinese	...	...	...	...	...	...	4	47	29
Bamboo and Wicker	...	...	...	...	...	...	1	14	14
Picture frames	...	...	...	...	...	...	23	143	142
Window blinds	...	...	...	...	...	...	9	365	340
Total	4	84	42	5	78	60	323	6,309	5,496
Class 14.—Drugs, Chemicals, and By-products.									
Blue, baking-powder, soda, &c.	2	28	28	1	43	43	11	820	484
Chemical works and drugs	8	160	87	...	...	...	48	813	610
Fertilisers	1	12	10	...	...	...	1	78	70
Perfumes and essences	...	...	...	...	...	...	10	625	609
Paints and varnishes	...	...	...	...	...	...	17	2,493	1,433
Other minor works	1	39	15	...	...	...	5	543	351
Total	12	239	140	1	43	43	92	5,372	3,557

Appendix VII—*continued.*

Class of Factory	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.									
Optical instruments	...	...	...	...	...	...	25	72	67
Surgical instruments	...	...	...	...	...	...	9	35	26
Other minor works	...	...	...	...	...	...	5	6	6
Total	...	...	...	...	...	...	39	113	99
CLASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.									
Electro-plating	...	...	...	1	3	...	31	364	330
Jewellery	...	...	...	...	...	...	58	550	428
Total	...	...	...	1	3	...	89	914	758
CLASS 17.—LIGHT, HEAT, AND POWER.									
Electrical apparatus	1	5	5	...	...	...	103	1,510	1,287
Electric light and power works	2	89,026	70,734	19	1,234	969	36	7,290	7,043
Gas	4	8,576	5,560	4	791	618	6	5,989	2,428
Lamps and gas mantles	...	...	...	...	...	...	2	93	60
Hydraulic power	1	25	22	...	...	...	1	55	55
Coke works	2	102	82	...	...	...	4	623	436
Total	10	97,734	76,403	23	2,025	1,587	152	15,560	11,309
CLASS 18.—LEATHERWARE (EXCEPTING SADDLERY AND HARNESS).									
Fancy leather	...	...	...	...	...	...	7	489	472
Leather belting	...	...	...	...	...	...	5	45	41
Portmanteaux and bags	...	...	...	...	...	...	7	85	67
Other minor works	2	24	6	3	51	27	26	149	125
Total	2	24	6	3	51	27	45	768	705
CLASS 19.—MINOR WARES (NOT ELSEWHERE INCLUDED).									
Baskets, &c.	...	...	...	...	...	...	1	2	1
Brooms and brushes	...	...	...	...	...	...	26	185	173
Florists and seedsmen	...	...	...	...	...	...	2	39	29
Laundries—European	20	502	288	3	23	22	113	1,363	1,173
,, Chinese	...	...	...	...	...	...	...	...	...
Rubber goods	2	222	148	...	...	...	7	9,927	7,057
Toys	...	...	...	...	...	...	12	109	84
Painting and signwriting	...	...	...	...	...	...	7	20	17
Other minor works	2	400	245	...	...	...	18	1,419	735
Total	24	1,124	681	3	23	22	186	13,064	9,269
Total, All Classes	289	132,738	100,166	177	6,060	4,518	5,677	193,432	135,780

Appendix VIII.

Horse-power of Machinery used and Method of Production, by Class of Factory, 1928.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
METROPOLITAN DISTRICT.									
I. Treating raw materials, product of pastoral pursuits	24	1,125	719	7	220	151	98	5,956	4,642
II. Oils and fats—animal, vegetable, &c.	8	878	383	...	...	...	15	2,551	2,054
III. Processes in stone, clay, glass, &c.	24	4,008	2,982	10	586	324	174	16,324	13,738
IV. Working in wood	49	6,373	4,786	18	198	145	368	15,837	12,116
V. Metal works, machinery, &c.	27	7,513	5,390	26	566	359	689	41,205	22,034
VI. Connected with food and drink, &c.	68	11,961	7,459	38	1,676	1,378	1,175	35,999	26,841
VII. Clothing and textile fabrics, &c.	24	1,222	1,021	11	228	167	1,348	14,055	7,691
VIII. Books, paper, printing, and engraving, &c. ...	2	23	13	18	273	185	403	13,043	10,055
IX. Musical instruments, &c.	...	...	...	...	...	...	21	1,017	992
X. Arms and explosives...	...	...	...	...	...	...	3	29	26
XI. Vehicles and fittings, saddlery and harness, &c ...	7	132	100	10	55	40	430	4,659	3,886
XII. Ship and boat building, &c.	4	298	41	3	35	30	27	657	512
XIII. Furniture, bedding, &c.	4	84	42	5	78	60	323	6,309	5,496
XIV. Drugs, chemicals, and by-products	12	239	140	1	43	43	92	5,372	3,557
XV. Surgical and other scientific instruments	...	...	...	...	...	...	39	113	99
XVI. Jewellery and plated-ware, &c.	...	...	...	1	3	...	89	914	758
XVII. Heat, light, and power	10	97,734	76,403	23	2,025	1,587	152	15,560	11,309
XVIII. Leatherware, n.e.i	2	24	6	3	51	27	45	768	705
XIX. Minor wares, n.e.i.	24	1,124	681	3	23	22	186	13,064	9,269
Total	289	132,738	100,166	177	6,060	4,518	5,677	193,432	135,780

Appendix VIII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
Newcastle District.									
I. Treating raw materials, product of pastoral pursuits	1	15	15	...	...	...	12	136	126
II. Oils and fats—animal, vegetable, &c.	4	62	51	...	...	...	5	94	82
III. Processes in stone, clay, glass, &c.	17	798	564	1	173	100	28	703	549
IV. Working in wood	73	2,440	1,973	7	56	39	83	1,511	1,132
V. Metal works, machinery, &c.	6	60,771	35,517	3	17	3	56	34,623	25,495
VI. Connected with food and drink, &c.	34	2,863	1,740	28	529	304	227	4,205	3,278
VII. Clothing and textile fabrics, &c.	1	5	5	...	...	...	82	193	127
VIII. Books, paper, printing and engraving, &c. ...	4	124	70	7	231	212	36	710	611
XI. Vehicles and fittings, saddlery and harness, &c. ...	...	...	...	7	524	295	111	647	523
XII. Ship and boat building, &c.	3	20	15	3	15	13	1	1	1
XIII. Furniture, bedding, &c.	...	...	...	3	62	39	25	280	254
XIV. Drugs, chemicals, &c.	...	...	...	...	...	...	4	203	168
XV. Surgical and other scientific instruments ...	...	...	...	...	...	...	3	4	4
XVI. Jewellery and plated-ware, &c.	...	...	...	...	...	...	3	19	16
XVII. Heat, light, and power	6	2,132	812	11	829	732	45	5,891	4,431
XVIII. Leatherware, n.e.i.	...	...	...	...	...	...	1	12	12
XIX. Minor wares, n.e.i.	2	24	18	3	36	16	8	127	111
Total	151	69,254	40,780	73	2,472	1,753	730	49,359	36,920
Rest of State									
I. Treating raw materials, product of pastoral pursuits	42	569	474	9	140	86	17	298	242
II. Oils and fats—animal, vegetable, &c.	4	34	23	...	...	...	...	...	...
III. Processes in stone, clay, glass, &c.	28	6,723	5,261	1	10	7	63	22,523	16,186
IV. Working in wood	252	6,468	5,135	38	469	386	186	3,388	2,777
V. Metal works, machinery, &c.	8	18,676	9,103	20	321	202	65	7,931	5,579
VI. Connected with food and drink, &c.	84	7,466	5,352	149	4,010	3,038	656	15,084	10,452
VII. Clothing and textile fabrics, &c.	8	798	591	6	49	48	121	1,680	1,326
VIII. Books, paper, printing, engraving, &c.	3	17	2	28	152	64	139	1,013	790
IX. Musical Instruments, &c.	...	...	...	...	...	...	1	10	10
XI. Vehicles and fittings, saddlery and harness, &c. ...	12	248	102	67	378	257	441	1,933	1,603
XII. Ship and Boat Building, &c.	...	...	...	...	...	...	...	...	...
XIII. Furniture, bedding, &c.	...	...	...	1	3	3	28	209	137
XIV. Drugs, chemicals, &c.	...	...	...	1	4	4	1	599	470
XV. Surgical and other scientific instruments, &c ...	...	...	...	1	87	87	3	6	5
XVI. Jewellery and plated-ware, &c.	...	...	...	...	...	...	1	2	1
XVII. Heat, light, and power	31	12,056	10,585	72	7,487	5,746	147	13,427	8,920
XIX. Minor wares, n.e.i.	11	157	93	3	38	33	16	156	112
Total	483	53,212	36,721	396	13,148	9,961	1,885	68,259	48,610
State.									
I. Treating raw materials, product of pastoral pursuits	67	1,709	1,208	16	360	237	127	6,390	5,010
II. Oils and fats—animal, vegetable, &c.	16	974	457	...	...	...	20	2,645	2,136
III. Processes in stone, clay, glass, &c.	69	11,529	8,807	12	769	431	265	39,550	30,473
IV. Working in wood	374	15,281	11,894	63	723	570	637	20,736	16,025
V. Metal works, machinery, &c.	41	86,960	50,010	49	904	564	810	83,759	53,108
VI. Connected with food and drink, &c.	186	22,290	14,551	215	6,215	4,720	2,058	55,288	40,571
VII. Clothing and textile fabrics, &c.	33	2,025	1,617	17	277	215	1,551	15,928	9,144
VIII. Books, paper, printing, and engraving, &c. ...	9	164	85	53	656	461	578	14,766	11,456
IX. Musical instruments, &c.	...	...	...	...	...	...	22	1,027	1,002
X. Arms and explosives, &c.	...	...	...	...	...	...	3	29	26
XI. Vehicles and fittings, saddlery and harness, &c. ...	19	380	202	84	957	592	982	7,239	6,012
XII. Ship and boat building, &c.	7	318	56	6	50	43	28	658	513
XIII. Furniture, bedding, &c.	4	84	42	9	143	102	376	6,798	5,887
XIV. Drugs, chemicals, and by-products	12	239	140	2	47	47	97	6,174	4,195
XV. Surgical and other scientific instruments	...	...	...	1	87	87	45	123	108
XVI. Jewellery and plated-ware, &c.	...	...	...	1	3	...	93	935	775
XVII. Heat, light, and power	47	111,922	87,800	106	10,341	8,065	344	34,878	24,660
XVIII. Leatherware, n.e.i.	2	24	6	3	51	27	46	780	717
XIX. Minor wares, n.o.i.	37	1,305	792	9	97	71	210	13,347	9,492
Total	923	255,204	177,667	646	21,680	16,232	8,292*	311,050	221,310

* In many factories more than one kind of power is used. The figures, therefore, are in excess of the actual number of factories using power.

Appendix IX.

Horse-power of Machinery used and Method of Production—1924–1928.

Year.	Steam.		Gas.		Electricity and other.		Total.	
	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	*No. of Factories.	Horse-power.
Metropolitan District.								
1924	354	83,968	337	6,988	4,938	91,493	5,629	182,449
1925	349	88,435	288	6,013	5,222	99,719	5,859	194,167
1926	369	100,314	250	5,836	5,403	113,152	6,022	219,302
1927	339	96,942	197	5,530	5,694	132,194	6,230	234,666
1928	289	100,166	177	4,518	†5,677	135,780	6,143	240,464
Newcastle District.								
1924	248	39,509	107	1,497	525	11,667	880	52,673
1925	235	41,081	97	1,695	544	13,106	876	55,882
1926	209	43,936	130	1,641	461	16,720	800	62,297
1927	170	41,214	76	1,373	685	17,949	931	60,536
1928	151	40,780	73	1,753	†730	36,920	954	79,453
Rest of State.								
1924	752	41,529	534	8,906	1,277	24,845	2,563	75,280
1925	722	41,664	516	9,945	1,459	24,571	2,697	76,180
1926	711	37,673	513	10,938	1,655	29,409	2,879	78,020
1927	575	45,333	416	9,367	1,695	33,543	2,686	88,243
1928	483	36,721	396	9,961	†1,885	48,610	2,764	95,292
State.								
1924	1,354	165,006	978	17,391	6,740	128,005	9,072	310,402
1925	1 306	171,180	901	17,653	7,225	137,396	9,432	326,229
1926	1,289	181,923	893	18,415	7,519	159,281	9,701	359,619
1927	1,084	183,489	689	16,270	8,074	183,686	9,847	383,445
1928	923	177,667	646	16,232	†8,292	221,310	9,861	415,209

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using power.

† Including 48 factories using oil of 1,415 horse-power (Metropolitan District).
„ 13 „ „ 579 „ (Newcastle District).
„ 442 „ „ 5,661 „ (Rest of State).
„ 503 „ „ 7,665 „ (State).

Appendix X.

Employment of Children.

Certificates of Fitness by class of Factory in Districts, 1928.

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Class 1.—Treating Raw Material—the Products of Pastoral Pursuits.									
Glue and gelatine	1	...	...	...	...	...	...	...	1
Tanneries	28	...	...	...	...	...	...	...	28
Wool scouring	2	...	...	...	...	...	...	...	2
Class 2.—Oils and Fats—Animal and Vegetable.									
Kerosene and oil	18	1	...	...	...	...	...	...	19
Soap, &c.	39	36	5	6	...	...	3	...	89
Class 3.—Processes in Stone, Clay, Glass, &c.									
Bricks, tiles, and pottery	219	...	4	...	...	...	1	...	224
Glass and bottle	89	4	...	...	...	...	...	...	93
Lime and cement	...	...	5	...	...	...	6	...	11
Class 4.—Working in Wood.									
Sawmills and joinery	58	14	7	...	1	...	...	...	80
Other woodworking	31	2	...	...	...	...	...	...	33
Class 5.—Metal Works and Machinery, &c.									
Brass and copper	36	1	...	...	...	...	...	...	37
Cutlery and tools	11	14	...	...	...	...	...	...	25
Engineering	520	6	36	...	...	...	5	...	567
Ironworks, stoves, &c.	174	33	41	...	...	...	9	...	257
Smelting and ore works	2	...	1	...	...	...	1	...	4
Wire works	34	4	31	...	...	...	2	...	71

Appendix X—*continued.*

Class of Factory.	Metropolitan.		Newcastle.		Broken Hill.		Rest of State.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
Class 6.—Connected with Food and Drink, and the Preparation thereof.									
Aerated waters	11	1	3	1	...	...	...	...	16
Biscuits	210	185	7	3	...	...	...	...	405
Bread and pastry	30	14	3	...	...	...	4	...	51
Condiments	6	...	...	...	...	...	...	...	6
Confectionery	98	274	6	3	...	...	...	3	384
Flour mills	3	17	...	...	...	...	2	...	22
Groceries and packing	70	77	5	9	...	...	...	...	161
Ice and refrigerating	4	...	2	...	...	...	...	...	6
Jam	7	7	...	...	...	...	...	...	14
Meat preserving	6	4	31	...	...	...	...	...	41
Sugar mills	1	9	...	...	...	...	...	...	10
Tobacco	67	92	...	...	...	...	...	...	159
Class 7.—Clothing and Textile Fabrics, and Fibrous Materials.									
Artificial flowers	1	26	...	...	...	...	...	...	27
Bags	15	18	...	...	...	...	...	...	33
Boots and shoes	167	253	1	...	3	...	1	1	426
Clothing	14	144	...	49	...	...	...	25	232
Corsets	...	49	...	...	...	...	...	...	49
Cotton mills	34	34	...	...	...	...	...	...	68
Dressmaking	5	854	...	11	...	...	...	6	876
Furriery	27	29	...	...	...	...	...	...	56
Hats and caps	42	58	...	...	...	...	...	...	100
Hosiery and knitting	41	367	...	1	...	...	...	...	409
Rope	9	12	5	...	...	...	...	...	26
Shirts	11	348	...	15	...	...	...	...	374
Tailoring	26	406	...	...	...	...	...	...	432
Tents, &c.	4	5	...	...	...	...	...	...	9
Umbrellas	3	14	...	3	...	...	...	...	20
Whiteworking	9	197	...	...	...	...	...	...	206
Woollen mills	88	117	...	...	...	...	29	40	274
Dye works and cleaning	8	3	...	...	...	...	...	...	11
Class 8.—Books, Papers, Printing, Engraving.									
Bookbinding	4	38	...	...	...	...	...	...	42
Paper boxes	95	110	...	3	...	...	...	...	208
Paper mills	17	6	...	...	...	...	...	...	23
Photography	5	24	...	...	...	...	...	...	29
Printing	247	156	4	1	...	...	8	1	417
Class 9.—Musical Instruments, &c. Pianos, Organs and Sewing Machines.									
Musical instruments	21	11	...	...	...	...	...	...	32
Class 10.—Arms and Explosives.									
Arms, ammunition, explosives	2	...	...	...	...	...	...	...	2
Class 11.—Vehicles and Fittings, Saddlery, Harness, &c.									
Coachbuilding	34	...	3	...	...	...	...	...	37
Motors and cycles	101	2	10	...	1	...	9	...	123
Class 12.—Shipbuilding.									
Ship and boat building	3	...	...	...	...	...	...	...	3
Class 13.—Furniture, Bedding, &c.									
Bedsteads, bedding	25	11	1	...	...	...	...	...	37
Furniture	83	8	4	...	...	...	1	...	96
Class 14.—Drugs, Chemicals and By-Products.									
Blue, blacking, polishes, &c.	6	16	...	...	...	...	...	...	22
Chemicals	61	66	...	...	...	...	...	...	127
Perfumes and essences	1	3	...	...	...	...	...	...	4
Paints and varnishes	28	12	...	...	...	...	...	...	40
Class 15.—Surgical and Scientific Instruments.									
Optical and surgical instruments	1	6	...	...	...	...	...	...	7
Class 16.—Timepieces, Jewellery and Plated Ware.									
Jewellery	21	6	...	...	...	...	...	...	27
Class 17.—Light, Heat, and Power.									
Coke and gas	3	1	...	...	...	...	1	...	5
Electrical apparatus, wireless, &c.	149	9	...	...	...	...	...	...	158
Class 18.—Leatherware, excepting Harness and Saddlery.									
Leather bags, &c.	91	100	1	...	...	...	...	...	192
Class 19.—Minor Wares not elsewhere included.									
Brooms	22	16	...	...	...	...	...	...	38
Cooperage	1	...	...	...	...	...	...	...	1
Florists and seedsmen	1	1	...	...	...	...	...	...	2
Laundries	4	48	...	9	...	...	...	1	62
Plumbers and tinsmiths	163	43	2	...	...	...	1	...	209
Rubber goods	27	36	...	...	...	...	1	...	64
Toys	16	7	...	...	...	...	...	...	23
Miscellaneous	71	55	...	...	...	...	3	2	131
Total	3,581	4,521	218	114	5	...	87	79	8,605

Appendix XI.—Accidents by Machinery, 1925–28.

Machines.	1925.	1926.	1927.	1928
Metal Working Machines—				
Drills	16	13	19	36
Emery wheels	40	36	25	53
Guillotines	1	6	9	6
Lathes	21	20	31	34
Milling	2	4	6	5
Polishing	2	2	16	16
Power presses	37	39	21	36
Riveting	1	4	1	2
Rolling	10	5	6	5
Screwing	1	2	1	2
Shaping	2	1	4	3
Shears	7	6	7	8
Slotting	...	1	1	1
Steam hammers	15	...	3	5
Wire-working	144	74	67	63
Other tinsmiths' machines	...	3	10	5
Other ironworking machines	18	34	32	57
	317	250	259	337
Woodworking Machines—				
Band saws	7	11	8	13
Boring	3	2	1	1
Circular moulders	22	13	18	17
Circular saws	72	65	48	70
Jointers	...	14	22	20
Lathes	2	2	5	5
Planers	38	22	15	15
Other woodworking machines	15	26	30	36
	159	155	147	177
Printing Machines—				
Cardboard box machines	3	17	1	12
Envelope machines	2	3	2	1
Guillotines	...	3	...	4
Platens	13	11	12	9
Printing machines	11	14	9	11
Wire-stitching machines	24	13	16	10
Other printing machines	39	30	57	58
	92	91	97	105
Food and Drink Machines—				
Biscuit machines	1	4	2	10
Confectionery machines	10	3	8	6
Dough brakes	2	6	...	9
Mincing	10	9	8	6
Mixing	3	..	4	...
Tobacco	4	7	11	13
Other food and drink machines	9	13	33	40
	39	42	66	84

Machines.	1925.	1926.	1927.	1928
Stone, clay, &c., Machines—				
Brick presses	1	2	1	1
Pans	...	1	...	...
Tile presses	1	1	2	2
Other stone, &c., machines	1	8	4	21
	3	12	7	24
Leather Working Machines—				
Power presses	3	4	2	2
Rolling	3	4	...	1
Other leather machines	11	12	9	14
	17	20	11	17
Clothing Machines—				
Boot machines	2	12	22	9
Fur-cutting	...	...	...	2
Sewing	7	6	8	4
Wool machines	11	17	27	30
Other clothing machines	7	10	8	23
	27	45	65	68
Laundry Machines—				
Calenders	4	10	3	...
Hydro-extractors	...	1	...	...
Ironing	4	6	3	2
Other Laundry machines	...	...	4	3
	8	17	10	5
Rubber Working Machines—				
Rolling	...	1	...	2
Other rubber machines	3	12	19	41
	3	13	19	43
Paintmaking machines	1	1	1	1
Soapmaking machines	4	4	2	7
Miscellaneous Machines—				
Elevators and cranes	33	36	13	11
Engines	2	4	...	...
Fan	2	...	...	...
Mill gearing	82	46	43	43
Other machines	23	34	25	8
	147	125	84	70
Total	812	770	765	930

Appendix XII.—Prosecutions by Districts, 1924–28.

Year.	Information Laid.	Convictions.	Dismissals.	Withdrawals.
		Metropolitan.		
1924	74	72	...	2
1925	79	75	3	1
1926	79	72	4	3
1927	57	56	.....	1
1928	163	73	1	89
		Newcastle		
1924	7	7	.....	.....
1925	7	7	.....	.....
1926	5	5	.....	.....
1927	.....	.....	.....	.....
1928	12	2	.....	10
		Rest of State.		
1924	8	8	.....	.....
1925	6	6	.....	.....
1926	6	6	.....	.....
1927	2	1	1	.....
1928	2	.....	.....	2
		The State.		
1924	89	87	.....	2
1925	92	88	3	1
1926	90	83	4	3
1927	60	57	1	1
1928	215	113	1	101*

* Including 3 summonses not served, and in one other case order was made by magistrate.

Sydney: Alfred James Kent, I.S.O., Government Printer—1929.

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LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

DEPARTMENT OF LABOUR AND INDUSTRY.

REPORT

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ON THE WORKING OF THE

FACTORIES AND SHOPS ACT, 1912,

DURING THE YEAR 1929.

Ordered by the Legislative Assembly to be printed, 26 *November*, 1930.

SYDNEY: ALFRED JAMES KENT, I.S.O., GOVERNMENT PRINTER.

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THE THIRTY-THIRD SERIES OF ANNUAL REPORTS FURNISHED TO THE MINISTER FOR LABOUR AND INDUSTRY IN TERMS OF SECTION 19 OF THE FACTORIES AND SHOPS ACT, 1912.

The Under-Secretary, Department of Labour and Industry, to The Honorable the Minister for Labour and Industry.

Department of Labour and Industry,
22nd August, 1930.

Dear Sir,

I forward for submission to Parliament, in terms of section 19 of the Factories and Shops Act, 1912, Annual Reports on the operations of that Act for the year ended the 31st December, 1929.

Yours faithfully,
F. W. KITCHING,
Under-Secretary.

OFFICE OF THE CHIEF INSPECTOR OF FACTORIES AND INVESTIGATION OFFICER.*

Operations.

Report in terms of Section 19 of the Factories and Shops Act, 1912.

Arrangement of Inspectorial Districts.

The provisions of the Factories and Shops Act were extended to cover the whole of the State, as from the 1st July, 1915. The area outside of the Metropolitan District is divided up into Country Districts, and the following statement will show the arrangement of these districts at the close of 1929 :—

District.	Head Centre.	Staff.
Newcastle	Newcastle	Superintending Inspector Clark.
		Inspector Weir.
		,, Young.
North Coast	Sydney	,, Hastie.
North-Western	Sydney	,, Armstrong.
South Coast	Woonona	,, Waugh.
Southern	Sydney	,, Wallace.
South-Western	Sydney	,, McEvoy.
Western	Orange	,, Baker.
Broken Hill	Broken Hill	,, Butler.
Central Western	Sydney	,, Hutchinson.

The Country District Officers, in addition to the work of factory inspection and investigations under the Industrial Arbitration Act, are required to carry out work under the Early Closing Acts as well as that pertaining to the departmental policy of Country Labour Exchanges.

Inquiries emanating from the Migration Section of the Department also devolved upon the Inspectors in both the metropolis and the country.

The following changes, new appointments, resignations and alterations in the control of districts occurred during the year :—

Messrs. J. W. Pert and J. P. G. Basclain were appointed as Factory and Industrial Inspectors in June and July respectively, and, later in the year, Messrs. J. P. O'Loughlin and G. S. Dunnett were appointed to similar positions.

Mr. Inspector Varley resigned from the Department and the Service on 26th March, 1929.

Mr. Inspector Weir took charge of a district in the Newcastle area in June *vice* Mr. Inspector MacCubbin transferred to Head Office.

Mr. Inspector Butler took charge of the Broken Hill District in January *vice* Mr. Inspector Bennet, transferred to Head Office.

Mr. Superintending Inspector Armitage, who entered the Service in April, 1891, and was appointed as an Inspector of Factories and Shops in February, 1897, died 10th August, 1929. Mr. Armitage was one of the three officers first appointed to the Inspectorate to administer the Factories and Shops Act.

Senior Inspector Miss J. G. Harriott, B.A., who had been appointed as an Inspector of Factories and Shops in January, 1910, died 25th November, 1929.

Statistics.

Cards of instruction served on the occupiers of factories within the Metropolitan District numbered 17,307 for 1929, as compared with 12,801 in 1928; in the Newcastle District, 2,312 in 1929, as against 2,199 in 1928; in the Broken Hill District, 139 in 1929, compared with 28 in 1928; in the rest of the State 4,780, as against 4,717 in the previous year.

---

*Matters covered by the Boiler Inspection Regulations made under Section 62 of the Factories and Shops Act, 1912, are reported upon by the Departmental Engineer and Chief Inspector of Scaffolding and Lifts.

Returns collected from factory occupiers for 1929 show that at the date of collecting the returns (end of November, 1929) 12,310 factories throughout the State employed 144,875 persons, compared with 11,421 factories employing 148,598 persons at the end of 1928, an increase of 889 factories and a decrease of 3,723 persons. Male employment decreased by 2,630, there being a decrease of 576 under 21 years of age, and a decrease of 2,054 over that age. Female employment decreased by 1,093, there being a decrease of 218 under 21 years of age, and an increase of 1,311 over that age. Of the total persons employed, 103,347, or 71·3 per cent., were male, and 41,528, or 28·7 per cent., were female.

The following statement will show the increase or decrease in the number of factories and persons, males and females, employed therein, from the year 1915, when the whole of the State was brought under the provisions of the Act, to 1929 inclusive :—

Year.	Factories registered.	Increase over previous year.	Persons employed		Total.	Increase over previous year.		Total	Percentage of total increase.	
			Males.	Females.		Males.	Females.		Males.	Females
1915	7,425	1,432	70,517	28,706	99,223	7,181	1,901	9,082	79·1	20·9
1916	8,065	640	63,895	28,757	92,652	*6,622	51	*6,571	*100·8	·8
1917	8,099	34	66,066	29,185	95,251	2,171	428	2,599	83·6	16·4
1918	8,346	247	74,719	31,246	105,965	8,653	2,061	10,714	80·8	19·2
1919	9,003	657	84,474	32,431	116,905	9,755	1,185	10,940	89·2	10·8
1920	9,745	742	92,566	33,479	126,045	8,092	1,048	9,140	88·6	11·4
1921	10,087	342	88,819	33,565	122,384	*3,747	86	*3,661	*102·3	2·3
1922	10,674	587	86,935	36,142	123,077	*1,884	2,577	693	*271·9	371·9
1923	11,058	384	95 926	35,635	131,561	8,991	*507	8,484	*105·9	5·9
1924	11,559	501	98,302	36,414	134,716	2,376	779	3,155	75·3	24·7
1925	11,836	277	100,771	37,916	138,687	2,469	1,502	3,971	62·1	37·9
1926	11,829	*7	109,650	41,972	151,622	8,879	4,056	12,935	68·6	31·4
1927	11,413	*416	107,018	41,940	148,958	*2,632	*32	*2,664	*98 7	*1·3
1928	11,421	8	105,977	42,621	148,598	*1,041	681	*360	289·1	*189·1
1929	12,310	889	103,347	41,528	144,875	*2,630	*1,093	*3,723	*70 6	*29 4

*Decrease.

Detailed figures as to the number and classes of factories, number and sex of employees, and horse-power of machinery used in the various districts of the State, will be found in the Appendices I to XI.

At the end of November, 1929, there were 7,333 registered factories in the Metropolitan District, employing 117,223 persons, an increase of 457 factories, and a decrease of 3,419 persons, compared with the figures at the end of the previous year. Of this decrease, males represented a decrease of 2,280, or 66·7 per cent., and females a decrease of 1,139, or 33·3 per cent., 1,690, or 49·4 per cent., and 1,325, or 38·7 per cent., being a decrease of males and females over the age of 21 years. Of the total persons employed, males represented 77,961, and females 39,262, or 66·5 and 33·5 per cent. respectively. Only 8,424, or 7·2 per cent., were under 16 years of age; 14,685, or 12·5 per cent., were between 16 and 18 years; 17,683, or 15 per cent., were between 18 and 21 years; and the remainder, 76,431, or 65·3 per cent., were over 21 years of age.

Of the total males employed, 3,243, or 4·1 per cent., were under 16 years of age; 7,225, or 9·3 per cent., between 16 and 18 years; 9,042, or 11·6 per cent., between the ages of 18 and 21 years; and the remainder, 58,451, or 75 per cent., were over 21 years of age.

Of the total females employed, 5,181, or 13·2 per cent., were under 16 years of age; 7,460, or 18·7 per cent., between 16 and 18 years; 8,641, or 22 per cent., between the ages of 18 and 21 years; and the remainder, 17,980, or 46·1 per cent., were over 21 years of age.

It is satisfactory to report that out of a total employment in the Metropolitan District of 117,223, only 8,424, or 7·2 per cent., were under 16 years of age. A comparison of the figures of each sex under and over 21 years of age is somewhat interesting, inasmuch as it demonstrates that, whereas the difference between the number of females of these ages is slight, the excess of males over 21 years of age is large. There were more females than males under 21 years of age employed in the factories in the Metropolitan District, but the males over 21 years of age exceeded the number of females over that age in the proportion of more than 3 to 1.

During the period of 1912 to 1914 the percentages of boys and girls under 16 years of age remained about the same; for the period 1914 to 1929, the percentage slightly increased, except for the year 1928, when there was a slight decrease, as the following table will show :—

Percentage distribution of persons under 16 years of age.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1912	2·3	2·9	5·2	1921	2·6	3·6	6·2
1913	2·2	2·8	5·1	1922	2·6	3·8	6·4
1914	2·3	2·9	5·2	1923	2·7	3·8	6·5
1915	2·8	3·1	5·9	1924	2 8	3·7	6·5
1916	2·6	3·3	5·9	1925	2·7	3·8	6·5
1917	2·5	3·4	5·9	1926	3·0	3·9	6·9
1918	2·4	3·3	5·7	1927	2·9	4·1	7·0
1919	2·6	3·4	6·0	1928	2·7	3·6	6·3
1920	2·5	3·4	5·9	1929	2·7	4·4	7·1

Taking the males and females under 16 years of age collectively, there was a slight decrease during 1913 over the previous year, but from 1914 to 1927 the precentage gradually increased, equalling in 1915, 1916, and 1917 that for 1920, as the table indicates. The percentage for 1918 was slightly below that for the three previous years, being 5·7 as against 5·9, but for 1923, 1924, and 1925 it was higher than for any year since 1909, when it was 6·8. The percentage for 1927 was 7·0, whilst for the year 1928 there was a slight decrease over the previous year. The percentage for 1929 is the highest on record.

The industry class employing the greatest number of persons in 1929 was clothing and textile fabrics with 32,409, followed by metal works, machinery, &c., with 19,348, and food and drink, &c., with 15,998; these three classes accounting for 67,755 out of a total of 117,223 employed in all classes of factories in the Metropolitan District.

Treating raw materials increased by 252; clothing, 190; printing, 517; drugs and chemicals, 158, as compared with 1928. The noticeable decreases in employment were in minor wares, 1,882; metal works, 659; woodworking, 519; light, heat and power, 416; jewellery, 365; food and drink, 354; and furniture, 238.

The following statement will show the increase or decrease in persons, males and females, from 1915 to 1929 inclusive :—

Year.	Persons employed.			Increase over previous year.			Percentage of total increase.	
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Female
1915	54,891	26,438	81,329	.....	.....	.....	.....	.....
1916	47,378	26,649	74,027	*7,513	211	*7,302	*102·9	2·9
1917	48,927	27,223	76,150	1,549	574	2,123	72·9	27·1
1918	55,355	29,145	84,500	6,428	1,922	8,350	77·0	23·0
1919	62,030	30,309	92,339	6,675	1,164	7,839	85·2	14·8
1920	68,583	31,270	99,853	6,553	961	7,514	87·2	12·8
1921	63,850	31,309	95,159	*4,733	39	*4,694	*100·8	·8
1922	66,888	33 802	100,690	3,038	2,493	5,531	55·0	45·0
1923	70,022	33,334	103,356	3.134	*468	2,666	117·5	*17·5
1924	71,642	34,131	105,773	1,620	797	2,417	67·0	33·0
1925	74,096	35,728	109,824	2,454	1,597	4,051	60·5	39·5
1926	82,518	39,465	121.893	8 422	3,737	12,159	69·3	30·7
1927	80,396	39,535	119,931	*2,122	70	*2,052	*103·4	3·4
1928	80,241	40,401	120,642	*155	866	711	*21·8	121·8
1929	77.961	39,262	117,223	*2,280	*1,139	*3,419	*66·7	*33·3

* Decrease.

The following table shows the increase or decrease in number of factories and persons employed therein during the same period :—

Year.	Number of factories.	Increase over previous year.	Persons employed.	Increase over previous year.
1915	4,758	.....	81,329	.....
1916	4,814	56	74,027	*7,302
1917	4,799	*15	76,150	2,123
1918	4,942	143	84,500	8,350
1919	5,330	388	92,339	7.839
1920	5,842	512	99,853	7,514
1921	5,934	92	95,159	*4,694
1922	6,367	433	100,690	5,531
1923	6,573	206	103,356	2,666
1924	6,868	295	105,773	2,417
1925	6,947	79	109,824	4,051
1926	6 837	*110	121,983	12,159
1927	6,877	40	119,931	*2,052
1928	6,876	*1	120,642	711
1929	7,333	457	117,223	*3,419

* Decrease.

Total increase—2,575 factories, 35,894 persons.

As at 30th November, 1929, 1,314 registered factories in the Newcastle District employed 11,248 persons, of whom 10,148, or 90·2 per cent., were males, and 1,100, or 9·8 per cent., were females. 59 per cent. of the females employed in the Newcastle District and 17·6 per cent. of the males were under 21 years of age. The large percentage of adult male employment was due to a great extent to the number employed at the steel and iron works of the Broken Hill Proprietary Company, Limited, at Port Waratah, Rylands Bros. (Aust.), Limited, Vickers' Commonwealth Steel Products, Limited, and Lysaghts', Limited; aggregating 4,376, or nearly 43·1 per cent. of the total number of males over 21 years of age.

In the remainder of the State, there were on 30th November, 1929, on the records of the Department, 3,663 registered factories, employing 16,404 persons; of whom 15,238, or 92·8 per cent., were males, and 1,166, or 7·2 per cent., females. This was an increase of 303 factories and an increase of 530 persons, as compared with 1928.

Horse-power of Machinery.

At the end of the year 1929, 10,365 factories throughout the State were using machinery equal to 558,313 horse-power.

Child Labour in Factories.

One hundred and fifty children under 14 years of age (79 boys and 71 girls) were granted the special permission of the Minister to engage in factory employment. Nine thousand one hundred and thirty-four children were certified as physically fit for employment in certain classes of factories.

Following is a table showing the distribution of the foregoing permits and certificates in the district in which the State is divided for departmental purposes :—

District	Permits granted.			Certificates of Fitness.	
	Special (to children between 13 and 14 years of age).			Issued.	Declined.
	Males.	Females.	Total.		
Metropolitan	79	71	150	8,682	.....
Newcastle	.....	.....	.....	266	.....
Broken Hill	.....	.....	.....	1	.....
Rest of State	.....	.....	.....	185	.....
Total	79	71	150	9,134	.....

By way of comparison, the numbers of special permits granted during the last ten years are shown hereunder :—

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1920	142	38	180	1925	173	64	237
1921	125	44	169	1926	118	69	187
1922	116	61	177	1927	92	51	143
1923	152	74	226	1928	89	67	156
1924	160	58	218	1929	79	71	150

New Industries.

Buttons are now manufactured locally, and as it is estimated that the value of the imported article into the Commonwealth annually approximates £250,000 it is expected that the industry has a promising future.

The plant, which had to be imported from Germany, the only country manufacturing the necessary machines, consists of five units. The fibre dises have to be cut to the required diameters and then polished. After heating, the discs are subjected to pressure and are later polished and drilled.

At the end of 1929 about 35 persons were employed and it is anticipated that this number will have to be largely increased to meet the demand for the local article.

A new industry which gives promise of extension was commenced in connection with the hand embroidering of children's half-hose and high-grade silk stockings. The article produced has a popular vogue and within a few months the number of employees, females, had to be increased from seven to forty.

A local company has commenced the manufacture of round and flat braids, tubular braiding, boot laces, and cords for electrical work. It is proposed also to manufacture all kinds of engineers packing, brake linings and canvas hose. Previously the whole of the above goods had to be imported. Employment is given at present to about twenty hands and it is expected that when normal industrial conditions are enjoyed this number will be largely increased.

Another firm commenced the manufacture of coir matting in long lengths. The output at present is about 800 lineal yards per week, and as satisfactory orders are still being received, there is every prospect of further expansion.

The coir used, either plain or dyed, is wound on spools and passed to a weaving machine which can produce any required design. The local article compares very favourably with imported products and the success of the industry seems assured.

In the Northern Rivers District oil extracted from the leaf of the ti-tree is now finding a market medicinally and as a deodorant. At the present time one distilling plant is in use and it is expected that additional plants will be installed in the near future.

Preparations were in hand towards the end of the year in connection with the manufacture of sheet and figured rolled glass. The manufacture of plate glass is to be included, and it is expected that about 350 hands will be employed when the works are established.

A new cement company has been established in a southern town and about fifty employees are now engaged. In connection therewith a large lime quarry is being operated and the prospects of increased trade and a corresponding increase in the number of employees are satisfactory.

The large electrical company referred to in last year's report was preparing at the end of the year to manufacture all grades of incandescent electric lamps. As about 12,000,000 of these lamps are imported annually into the Commonwealth of an approximate value of £1,000,000, there would seem to be ample encouragement for local manufacture. It is anticipated that about 200 additional employees will be required in the new department and that 90 per cent. of these will be females.

Preparations were also well forwarded towards the end of the year in the manufacture, locally, of all celluloid articles. As the value of the imports into the Commonwealth annually of celluloid and celluloid articles is very high, the new industry seems assured of success.

Overtime in Factories.

During 1929 the Minister granted applications for extensions of overtime in respect of 50 factories, affecting 26 male and 820 female employees. Similar permission was granted during the previous year in respect of 31 factories, involving 7 male and 466 female employees, and the figures for 1927 were 60 factories and 130 males and 1,040 females.

The following table sets out the classes of factory in which the additional overtime was worked :—

Class of Factory.	Factories.	Employees.		Total.
		Male.	Female.	
Class II—				
Soap	3	.....	25	25
Class VI—				
Pastry Cooking	1	.....	19	19
Confectionery	3	.....	77	77
Class VII—				
Clothing	2	.....	11	11
Spinning	7	18	204	222
Dressmaking and Millinery	1	.....	23	23
Underwear	8	.....	92	92
Hosiery and Knitting	4	3	93	96
	22	21	423	444
Class VIII—				
Printing	19	3	262	265
Class XIX—				
Novelties	2	2	14	16
Total	50	26	820	846

Fencing and Guarding of Machinery.

The satisfactory standard in fencing and guarding of factory machinery achieved as the result of the concerted efforts of the inspectors during the past several years was well maintained in the year under review.

Occupiers, generally, now realise that it is the better policy from every point of view to erect substantial fences and guards rather than to endeavour to satisfy the requirements of the Act by less effective methods.

In this connection the policy of consultation referred to in the previous report is being more regularly followed in the disposition and guarding of new plants, as well as in any alteration in the lay-out of existing plants.

It may be claimed also that the danger arising from inattention on the part of the operatives is being steadily reduced. While it may never be possible altogether to dismiss this human factor much is being done by repeated inspection and discussion with employees towards this end.

It is pleasing to note from this year's statistics that the number of factory visits by inspectors during 1929 discloses a large increase upon those paid during the previous year. This, of course, was made possible by additions to the inspectorial staff which had unfortunately become seriously depleted. It has to be admitted that while occupiers, generally, are ready to comply with the Act and Regulations this co-operation falls away if the visits by inspectors are reduced.

As in previous years the majority of mechanical accidents occurred at circular saws and moulders hand planers, and power presses. The inspectors are directed to give special attention to these machines and much thought has been given to the better protection of their operative parts. While it is possible to guard effectively the circular saw for most of its periphery, the cutting edge, or the part which first meets the timber, still presents difficulties. Sawyers, as a rule, advance objections to any form of guard which interferes with their free vision of this part of the tool.

A circular moulder, in some of its operations, is a difficult tool to guard effectively, but it can be claimed that at least its most dangerous parts can be safely harnessed. The use of the wrong tool in certain work has been proved to be the cause of many accidents at this type of machinery. This is a contingency which cannot be charged to lack of inspection or attention by the inspector.

Satisfactory and safe methods of guarding hand planers have for several years been approved by the Department, and printed sketches of same, with instructions, are always available, as are those approved for many other dangerous machines. If the types of guards approved are properly affixed and maintained the risk of accident is much reduced. It is noted, with pleasure, that the "circular" head is coming steadily into general use. The substitution of this for the dangerous "square" head must prove a helpful factor in reducing the number of accidents of these machines.

Experience has allowed the inspectors to design guards for almost every operation performed by power presses. Even the heavy "toggle" types can now be satisfactorily guarded, emphasising a distinct advance.

Reference has frequently been made to the value of safety-first committees in factories, and the suggested establishment of a safety-first council gives encouragement to the hope that such committees will become definite quantities in the near future. They have been proved to be useful in other parts of the world, and there is no doubt that if the council referred to is established its effects will be reflected in our factories and greater interest will be taken by employers and employees in the safeguarding of factory machinery.

Accidents in Factories.

Following is an analysis of the reported accidents, and the extent of injuries:—

Extent of Injury.	Accidents Reported.				
	District.				Total.
	Metropolitan.	Newcastle.	Broken Hill.	Rest of State.	
Fatal	14	4	...	4	22
Permanent Injury—					
Loss of arms	3	...	...	...	3
,, hands	1	...	...	2	3
,, fingers or parts	148	11	1	7	167
,, eye	1	...	...	...	1
,, legs	...	...	...	...	...
Temporary Injury—	153	11	1	9	174
Gas poisoning	2	2	...	...	4
Burns, scalds, &c.	382	74	1	31	488
Cuts, lacerations, bruises—					
On hands	2,155	247	3	90	2,495
,, arms	389	57	1	23	470
,, body	843	149	1	66	1,059
,, feet	579	147	6	41	773
,, head	347	89	1	24	421
Other	93	10	...	3	106
	4,750	775	13	278	5,816
Total	4,917	790	14	291	6,012

The following statement gives the distribution of accidents as due to machinery or other causes. Appendix X contains details of machinery at which accidents happened.

Causes of Accident.

Machinery—

Metal working	460	Paper, printing	123	*Miscellaneous—*	
Woodworking	292	Leather	15	Mill gearing	62
Stone, clay, &c.	32	Rubber	59	Elevators, conveyors, &c.	23
Food and drink	97	Laundry	11	*Accidents under Section 38*d	4,305
Clothing, &c.	111	Other	31		

Other Causes.

Dangerous substances—		Electricity	8
Steam	15	Chemicals	15
Hot substances—		Gas	21
Water	28	Other	17
Metal	158		
Other	129	Total	6,012

* These accidents occurred through causes not specified above, but so disabling the injured person as to prevent him from returning to his work in the factory within seven days.

Fatal Accidents.

During the year twenty-two persons lost their lives as the result of accidents in factories. Of these, three were occasioned by mechanical means, thirteen by non-mechanical means, and six by contact with live electrical apparatus. They are briefly described hereunder:—

The occupier of a country sawmill was passing a revolving circular saw when he stumbled and fell upon the bench, his head being seriously injured by the cutting edge of the saw, a portion extremely difficult to guard. Death resulted the same day.

At a tile works a youth attending a pug-mill made occasion to go under the platform of the mill. While so engaged his left arm was caught and crushed between the pinion and spur wheels driving the mill. He subsequently died from shock and haemorrhage.

In a metal works an employee was engaged sorting rivets near the wall of a traverser pit. Owing to the noise created by a number of air hammers he did not hear the approach of the traverser and was crushed against the wall, dying the same day from the injuries received.

A fire occurred at a film laboratory, and a girl employed as a film cutter was overcome by carbon monoxide fumes, death ensuing before her rescue was possible.

In a large engineering works a man had been employed upon a scaffold at a considerable height above the ground, and while descending fell and struck his head against some housing with such force that the injury caused death.

An employee was engaged, with others, in moving a vertical drilling machine which had been placed upon rollers, when the machine overbalanced and fell upon him inflicting fatal injuries.

A lad was standing upon the runway of an overhead crane brushing down columns for painting when he lost his footing and fell a distance of 25 feet, being instantly killed.

A printing roller was being placed in position when it slipped from the sling and crushed an employee against a truck. He died in hospital the same evening.

A log was being removed from a hot water tank, in a large wood-working factory, by means of a winch, when the sling hook caught the plank upon which an employee was working and he was thrown into the hot water, the resulting burns and shock causing early death.

In a steel works an employee following his duties as a moulder was struck on the head by some metal which fell about 40 feet from an overhead crane. He received such serious injuries that death resulted.

A man employed as an ore bridge driver at a steel works was adjusting some traverse gear when he fell a distance of about 60 feet, dying shortly afterwards in hospital.

An employee while placing a red hot steel bar in a cooling pit was apparently overcome by giddiness and falling into the hot water was so badly scalded that death ensued.

In a fibro-cement works an employee was removing a sheet of fibro from a stack when the stack collapsed and, falling upon him, caused such serious injuries that he died shortly afterwards.

An employee in a brewery whilst following his occupation as a cellar-man struck his head violently on the tank of a pulp machine. He returned to work the next morning, but later collapsed after complaining of severe pains in his head. He succumbed shortly afterwards.

At a large flour mill a shunter was crushed between the buffers of two railway trucks. He lived for two days after the accident.

A moulders' labourer was following his ordinary duties and working under the jib of a crane. Whilst the jib was being lowered the casting housing the safety pin snapped and the jib in its fall struck the employee, causing fatal injuries.

A painter employed at an electric power station came in contact with live high tension electrical apparatus and the resulting shock caused his death. The building was under construction at the time.

The proprietor of a butcher's smallgoods factory met his death by inadvertently handling live wires conveying electricity. His death was instantaneous.

In a similar factory the meat rail in the shop became electrically charged by reason of faulty installation. An employee in hanging some meat upon the rail received such a severe shock that his death occurred shortly afterwards.

Men were engaged concreting in a rubber works and it being necessary to move the electric light under which they were working one of the men essayed to do this, and in his effort received a severe shock, the result of improper fitting of the lamp. The shock proved fatal.

In a linseed oil works a similar fatality occurred, the handle of a portable electric lamp becoming alive through faulty installation.

Electric shock was also responsible for the death of an employee at an engineering works. The victim was on night duty and while removing a globe from a holder came in contact with live parts with fatal results.

Means of Escape in case of Fire.

Many plans of proposed alternative means of escape were forwarded, in accordance with the Act, to the Department during the year, and it can be said that the amendment of the Act requiring this course to be followed has been justified. The power given in the amendment to have all means of escape properly maintained has also been proved to be of great assistance in the efforts to maintain fire escapes in factories in a satisfactory condition.

The usual problems resulting from either the alteration in construction or from heightening of factory buildings, were faced and in almost all cases satisfactorily discharged, and the assistance of the Chief Officer of Fire Brigades or his representatives was always available.

External stairways are avoided as much as possible, preference being given to internal and balcony and roof escapes to adjoining premises. Architects designing new factory buildings requiring alternative means of escape are helping greatly in abolishing as far as possible external means of escape.

Inspections of means of escape were regularly made to ensure that the regulations were satisfactorily observed, and, where necessary, instructions were promptly given to minimise any possible danger to factory employees.

Many visits were paid to factory premises in company with the representatives of the Chief Officer of Fire Brigades, who certified that during the period under review sixty-eight factory premises had been provided with satisfactory alternate means of escape.

Prosecutions.

During the year informations for breaches of the Factories and Shops Act and Regulations were laid in 531 cases.

Following are the details :—

Section.		Convictions.	Dismissals.	Withdrawals.	Total.
6 (15)	Failing to pay registration fee	232	1	158*	391
7	Being in occupation of unregistered factory	48	.....	16*	64
20	Failing to keep premises in a cleanly state	2	.....	.....	2
26	Failing to provide seating accommodation	2	.....	.....	2
33	Failing to fence dangerous machinery	25	.....	2*	27
38	Failing to report accidents	5	1	1	7
41	Employing boy on prohibited machine	2	1	.....	3
43	Breaches of overtime provisions	2	.....	1	3
45	Employing children under 16 without certificates	12	.....	1	13
25	Failing to use efficient exhaust system	4	.....	.....	4
49	Working or permitting work in furniture factories after hours	12	.....	2*	14
70	Obstructing an inspector	1	.....	.....	1
	Total	347	3	181	531

* Summonses were not served in thirteen instances, namely :—Nine under Sec. 6 (15), one under Sec. 7, two under Sec. 33, and one under Sec. 49.

WALTER I. TAYLOR,

Chief Inspector of Factories and Investigation Officer.

FACTORIES AND SHOPS ACT, 1912.

SECTION 62.

Boiler Regulations.

Annual Report.—Period January–December, 1929.

The Departmental Engineer reports as follows :—

Accredited Inspectors.

Applications Made and Certificates Granted.—During the year twenty-four (24) made application for the Minister's Certificate of Approval to inspect boilers and other pressure vessels installed in factories, twenty (20) being granted and certificates issued. At the end of the period under review there were 180 active accredited inspectors, as per list attached.

Boiler Inspection.

Reports in connection with the inspection of boilers and other pressure vessels numbering 8,899 were lodged by accredited inspectors as follows :—

	Reports received.		
	Boilers.	Other Pressure Vessels.	Total.
Prescribed Reports:—			
First Inspections	535	858	1,393
Re-inspections	2,833	4,002	6,835
Total	3,368	4,860	8,228
Non-prescribed Reports:—			
Internal	671	.....	671
Grand Total	4,039	4,860	8,899

The number of various types of boilers and other pressure vessels inspected, discarded, and newly installed are given in the following table :—

	First Inspection.	Re-Inspection.	Total.	Discarded.	Newly Installed.	Explosions.
Boilers—						
Cast-iron Sectional	13	59	72	3	13	...
Colonial	119	780	899	17	119	...
Cornish	3	89	92	2	3	...
Egg-ended	...	4	4	...	...	...
Jackass	4	25	29	1	4	...
Lancashire	5	84	89	...	5	...
Locomotive, including Portable Traction, and Road Rollers.	72	437	509	6	72	...
Marine Wetback	1	1	2	...	1	...
Marine Dryback	5	41	46	...	5	...
Multitubular	13	209	222	7	13	...
Vertical	205	684	889	23	205	...
Watertubes	31	401	432	7	31	
Wolff	...	...	...	...	...	
Other Steam Generators	64	19	83	...	64	...
Total	535	2,833	3,368	66	535	...

Types of Boilers and other Pressure Vessels Inspected, &c.—*continued.*

	First Inspection.	Re-Inspection.	Total.	Discarded.	Newly Installed.	Explosions.
Other Pressure Vessels—						
Air and Water Receivers	441	972	1,413	8	441	...
Autoclave Presses	...	30	30	1	...	...
Calenders, including Mangles	12	157	169	...	12	...
CO_2 Cylinders and Purifiers	6	130	136	...	6	...
Coolers	...	16	16	...	...	...
Copper Coils and Pipe Heaters	3	108	111	...	3	...
Cylinders, Drying Drums and Boilers (Steam Heated).	16	384	400	...	16	...
Desiccators	2	9	11	...	2	...
Digestors	5	87	92	2	5	...
Economisers	...	9	9	...	...	...
Hot Tables—Presses, Drying Tables, Cantilever Presses, Patching Tables.	15	174	189	1	15	...
Jacketed Vessels	78	932	1,010	10	78	...
Monteju and Crystalizers	3	31	34	...	3	...
Oil Receivers	1	...	1	...	1	...
Retorts	10	53	63	...	10	...
Steam-heated Rolls	...	27	27	...	...	...
Steam-heated Vessels	12	229	241	...	12	...
Steam Separators	...	1	1	...	...	...
Sterilizers	2	15	17	...	2	...
Stills	...	20	20	...	...	...
Stout and Wine Butts	...	6	6	...	...	...
Sugar Drivers	...	...	...	...	...	...
Superheaters	...	3	3	...	...	...
Vacuum Vessels	1	19	20	...	1	...
Vegetablo Steamers	...	...	...	...	...	...
Vulcanizers	251	590	841	7	251	...
Total	858	4,002	4,860	29	858	...
Grand Total	1,393	6,835	8,228	95	1,393	...

Notices Served upon Factory Occupiers.

Notices numbering 376 were served upon factory occupiers to ensure compliance with the requirements of the Boiler Regulations, as per the following summary :—

	Boilers.	Other Pressure Vessels.	Total.
Blow-off Cocks	4	1	5
Casing in Lever Safety Valves	1	.....	1
Cocks between Check-valve and Boiler	4	.....	4
Direct spring Loaded Safety Valves	24	33	57
Feed Pumps	.....	.....	.....
Fusible Plugs	20	.....	20
Injectors	.....	.....	.....
Isolating Valves	1	.....	1
Pressure Gauges	42	18	60
Reducing Valves	1	7	8
Safety Valves to be Locked	5	8	13
Test Cocks	29	.....	29
Valves in Steam Connections	2	1	3
Water Gauges	5	3	8
Water Gauge-glass Protecters	20	.....	20
Unclassified	89	58	147
Total	247	129	376

Explosions.

There were no explosions coming within the ambit of the Boiler Regulations under the Factories and Shops Act, 1912, reported during the year.

Factories and Shops Act, 1912—*Regulations for the Inspection of Steam Boilers, &c.*

ACCREDITED INSPECTORS.—31ST DECEMBER, 1929.

In accordance with the provisions of clause 5 of the Regulations of the 10th March, 1916, made under section 62 of the Factories and Shops Act (published in *Industrial Gazette*, vol. 9, p. 815), the Minister has approved that the persons whose names appear hereunder may make inspections and carry out all other necessary duties pertaining to the application of such Regulations.

The names appear in groups, comprising persons resident in Sydney and Suburbs, Newcastle and district, and country centres, respectively.

Sydney and Suburbs.

Cert. No.	Name.	Address.
190	Adamson, D. J. ...	21 Dartbrook-road, Auburn.
75	Allen, J. A.	"By the West," Ortona-road, Roseville.
182	Allum, S. C.	42 Bridge-street, Sydney.
131	Archer, C. S.	Chaleyer-street, Rose Bay.
4	Banyard, T. R.	c/o L. Hinks & Co., Ltd., Engineers, 2 O'Connell-street, Sydney.
204	Barron, W. N.	"Narani," President-avenue, Brighton-le-Sands.
217	Bell, A. C.	21 Shaftesbury-road, Burwood.
172	Bennett, C. T.	"Penryn," Sutherland-crescent, Darling Point.
17	Bernard, T.	17 Lenore-street, Five Dock.
9	Berry, J. H.	c/o Royal Insurance Co., corner Spring and Pitt streets, Sydney.
221	Booth, H. C.	5 Dudley-street, Haberfield.
259	Boulton, R. A.	80 Phillip-street, Balmain.
254	Boyd, H. J.	5 Gataere-avenue, Lane Cove.
166	Brighton, E. J. B....	77 Glenmore-road, Paddington.
272	Burton, W. F.	McArthur-street, Guildford.
233	Butler, N.	Pittwater-road, Gladesville.
213	Campbell, A.	Russell-avenue, Lindfield.
105	Campbell, A. N. ...	c/o Tooth & Co., Ltd., George-street West, Sydney.
181	Chapman, F. J.	37 Dolphin-street, Randwick.
62	Chapman, G.	26 Clara-street, Erskineville.
109	Christie, J.	Woodburn-road, Lidcombe.
76	Clarkson, E. J.	"The Hut," Seaview-street, Balgowlah.
161	Coleman, J. H.	32 Paisley-road, Croydon.
21	Connie, P.	275 Henderson-road, Alexandria.
189	Connie, W. F.	275 Henderson-road, Alexandria.
236	Crouch, E. E.	20 Napier-street, North Strathfield.
267	Cuthbert, P. O.	No. 4 Moana Flats, Upper Bay View street, McMahon's Point.
212	Davies, A. J.	11 Foucart-street, Rozelle.
28	Davis, C. E.	70 The Avenue, Granville.
180	Davis, H. C.	20 Hayden-street, Mosman.
252	De Jaunay, H.	"Cardon," Lawn-avenue, Lane Cove.
230	Dempster, G.	24A Forsyth-street, Willoughby.
153	Denovan, C.	89 Lyons-road, Drummoyne.
199	Dobson, A. J.	12 Tenilbra-road, Northbridge.
218	Donaldson, D. A. ...	20 West-street, Five Dock.
240	Donaldson, W. J. ...	6 Slade-street, Crow's Nest.
211	Donnelley, N. S. ...	42 Deniug-street, Drummoyne.
92	Duncan, J.	7 Lord-street, Kogarah.
248	Dunnett, G. S.	"Wandeen," Huntley's Point.
53	Elder, Wm.	6 Dalley-street, Sydney.
186	Fairclough, C. S. ...	63 Booth-street, Balmain.
202	Ferguson, W. J. ...	12 Glover-street, Paddington.
19	Fielder, J.	N.R.M.A., 30 Crosvenor-st., Sydney.
206	Fogarty, J.	20 Fen Boyd road, Neutral Bay.
226	Fowler, C. E.	"Palmiston," Carnarvon-st., Auburn.
49	Fox, F. C.	351 Kent-street, Sydney.
50	Fraser, H.	"Invernes" 7 Alvistor-street, Strathfield.
222	Frye, F. T.	41 Chaleyer-street, Rose Bay.
219	Garrow, P. M.	"Rosslyn," Alice-street, Lakemba.
223	Gleeson, Michael ...	196 Darling-street, Balmain.
260	Gray, T. C.	39 Grosvenor-street, Sydney.
2	Gregory, R.	Walton-crescent, Abbotsford.
124	Hall, S. G.	25 Moore-street, Lilyfield.
31	Hastie, J.	Joseph-street, Ashfield.
264	Hoskins, C.	"La Torca," Belmore-ave., Belmore.
134	Hosking, W. J.	67 Day-street, Sydney.
235	Hughes, C. S.	"Talkoe," Warringal-street, Turramurra.
266	Hughes, J. J.	49 Holt-avenue, Cremorne.
29	Hunter, A. H.	Woolwich-road, Hunter's Hill.
205	Kennedy, J. M.	76 Kellett-street, Darlinghurst.
227	Keogh, P. J.	53 Green's-road, Paddington.
20 269	King, P. R.	Victoria-road, Marrickville.
228	Kirkcaldie, W. K.	"Yallambee," Greenwich-road, Greenwich.
93	Kirkwood, D.	18 Leopold-street, Croydon.
154	Lawson, D.	30 Thompson-street, Balmain.
1	Lawson, J.	Queensland Insurance Co., Pitt street, Sydney.
187	Lewis, A.	Grasmere-road, Lindfield.
232	Lyall, F.	"Sorrento," Abbotsford-road, Abbotsford.
191	Martin, A. E.	"Bretley," Kerr's-road, and Tilba-street, Lidcombe.
22	Mason, H. D.	25A Pitt-street, Sydney.
7	Massey, G.	Post Office Chambers, Pitt-street, Sydney.
230	McCadams, Rob't W	Tressider-avenue, Haberfield.
39	McDonald, T. W. ...	"Durham," Rosebery-street, Mosman.
242	McLachlan, A.	"Brookside," Riverview-parade, Manly.
5	McLardy, J. R.	Broderick-street, Balmain.
94	McRoberts, H. A. ...	12 Grosvenor-road, Lindfield.
51	McSwiney, J.	Union Assurance Co., 14 O'Connell street, Sydney.
10	Mitchell, S. M.	Mercantile Mutual Insurance Co., 117 Pitt-street, Sydney.
77	Morrison, A.	Pearson-street, Balmain.
132	Nairn, A. C.	"Shanklin," 38 Knox-street, Clovelly.
174	Nicholls, W.	c/o R. Wildridge & Co., 76 Pitt-street, Sydney.
12	Nicoll, G.	24 The Crescent, Homebush.
68	Oliver, R. K.	48 Warrane-road, Willoughby.
115	Orchard, A. E.	"Harbour View," 2 Lookes-avenue, Balmain East.
255	O'Sullivan, J. D. ...	27 Gibbon-road, Auburn.
225	Pain, E. O.	129 Livingstone-road, Marrickville.
188	Pearson, F. W.	60 Premier-street, Marrickville.
268	Porteus, A. C. F. ..	13 Victoria-parade, Manly.
257	Porteus, A.	23 Boulevarde, Enfield.
67	Rawson, C.	32 Jamieson-street, Sydney.
121	Reeks, R. W.	12 Renwick-street, Drummoyne.
234	Reid, J.	15 Shakel-avenue, Concord.
162	Reynolds, L. J.	82 Pitt-street, Sydney.
229	Richards, R. D. ...	780 Military-road, Mosman.
42	Rodgers, S. D.	"Dalmeny," 17 York-road, Centennial Park.
256	Rollo, A. J.	93 Cook-road, Centennial Park.
255A	Rossell, A. H.	20 Evelyn-avenue, Concord.
175	Russell, R.	The Avenue, Granville.
45	Savage, J.	33 Tweedmouth-avenue, Rosebery
273	Scott, E. J.	11 James-street, Manly.
30	Scott, J. J.	10 Alice-street, North Sydney.
253	Scott, R. W.	10 Alice-street, Auburn.
249	Sealy, W. B.	60 Ashley-street, Chatswood.
263	Siddoway, A. H. ...	32 Stan-street, Willoughby.
132	Sinclair, W.	97 Pitt-street, Sydney.
265	Small, O. E.	"Natalie," Massey-street, Gladesville.
209	Smeal, K. H.	8 Hazelbank-road, Wollstonecraft.
220	Smiles, W.	7 Iredale-avenue, Cremorne.
171	Smith, H. D.	"Malua," Fisher's-avenue, Vaucluse.
80	Smith, J. M.	Peacock Point, Balmain.
208A	Smith, W. H.	"Carinya," Burns crescent, Chiswick.
111– 241	Stephenson, W. F....	2 Hunter-street, Sydney.
128	Stevenson, G.	Point road, Northwood.
275	Stevenson, R. E. ...	"Kenley Moor," Chertsey-avenue, Bankstown.
58	Stobo, S. E.	Moree-street, Gordon.
88	Storre, F. E.	54 Young-street, Sydney.
118	Stronach, J.	Ewenton-street, Balmain.
15	Tate, A. S. W.	Kelvyn Flats, Bootha-road, Neutral Bay.
270	Taylor, C.	"Bangor," Raven-street, Gladesville.
239	Teare, C. J. P.	"Ellerslie," Hay-street, Croydon.
66	Thomson, J. Sted....	33 Macquarie-place, Sydney.
13	Totolos, A.	35A Rangers-road, Cremorne.
16	Treffone, D.	59 Holmwood-street, Newtown.

ACCREDITED INSPECTORS—*continued.*

Cert. No.	Name.	Address.	Cert. No.	Name.	Address.
		Sydney and Suburbs—continued.			
207	Turner, C.	"Wirringilla," Susan-st., Randwick.	178	Weeks, T. E.	"Avergue," Parramatta-road, Haberfield.
46	Vyle, C.	14 Jones-street, Pyrmont.	160	Wildridge, A. H.	76 Pitt-street, Sydney.
231	Walker, W. A.	11 Fanning-street, Tempe.	14	Wildridge, R.	76 Pitt-street, Sydney.
238	Wallace, J. D.	29 Cabarita-road, Cabarita.	83	Williams, A.	29 Tressider-avenue, Haberfield.
274	Warner, W. C.	6 Cambridge-street, Suspension Bridge, North Sydney.			
		Newcastle and District.			
117	Cameron, T.	11 Rowan-street, Merewether.	127	McIntyre, J. P.	Robert-street, Mayfield.
100	Clegg, W. F.	cr. Lorna and Bridge sts., Waratah.	87	Morrison, D. N.	c/o Morison and Bearby Ltd., Carrington.
271	Costa, R. A.	Lockyer-street, Adamstown.	11	Rodgers, J. E.	Church-street West, Newcastle.
158	Craig, H.	23 Janet street, Merewether.	237	Rodgers, R. N.	c/o Builders' Exchange, 27 King-street, Newcastle.
125	Dalby, G. W.	47 Mitchell-street, Stockton.	73	Taylor, A.	19 Hudson-street, Hamilton, Newcastle.
56	Dick, Jas.	20 Fitzroy-street, Mayfield.			
74	Dick, Wm.	Fern-street, Islington.			
104	Ellis, R. G.	Kerr-street, Mayfield.			
		Country Districts.			
		North.			South.
119	Brazenall, E.	Hillgrove.	33	Coutts, H. K.	Town Hall, Goulburn.
168	Caukroger, F.	Tingha.	70	Hargreaves, R. S.	"Keira," Cootamundra.
98	Ratcliffe, J. R.	Rouchel-road, Aberdeen.	194	Stevens, E. R.	Pumping Station, Tenandra.
198	Wearne, Wm.	Emmaville.			
		North Coast.			South Coast.
247	Bates, H. D.	Blackalls-avenue, Blackalls, Lake Macquarie.	197	Clark, J. C. B.	Stanley-street, Wollongong.
245	Cassels, R.	Harwood, Clarence River.	82	Harrison, G.	Kinghorn-street, Nowra.
152	Cliff, R. C.	c/o Kempsey Electric Light and Power Supply Co., Ltd.	35	Jones, S. C.	c/o Electrolytic Refining Co., Ltd., Port Kembla.
114	Frewin, F. A.	31 Prince street, Grafton.	140	Noble, J.	Kinghorn-street, Nowra.
57	Guthrie, A.	157 Molesworth-street, Lismore.	103	Sharp, J. W.	cr. Ocean and Edward streets, Wollongong.
262	Henderson, W. J.	Harwood, Clarence River.			
78	Issacs, A. R.	c/o Colonial Sugar Refining Co., Ltd., Broadwater, Richmond River.			West.
244	Johnston, W.	Dredge "Forster," Cape Hawke.	107	Allibon, H.	Deniliquin.
246	McGuinness, P. J.	c/o Royal Hotel, Morpeth.	224	Danks, J. R. W.	Technical College.
59	Mathews, T. B.	c/o Colonial Sugar Refining Co., Ltd., Condong, Tweed River.	128	Donovan, D.	Canonbar, via Miowera.
			243	Folster, W.	Box 107, P.O., Orange.
71	Smith, E. W.	Coff's Harbour Jetty.	164	Giffin, J.	Proprietary Mine, Broken Hill.
184	Wilson, J. A.	Harwood, Clarence River.	169	McAskill, A. W.	Junction Mine, Broken Hill.
102	Wood, E. H.	Crane-street, Ballina.	26	Parker, E.	Hassan's Walls road, Lithgow.
65	Woodley, E. H.	Victoria-street, Taree.	201	Reece, T. A.	Electric Light Works, Broken Hill.
			163	Woolcock, H. A.	325 William-street, Broken Hill.

The following companies have on their respective staffs persons holding the Minister's certificate of approval to inspect boilers, &c., under the Boiler Inspection Regulations:—

Atlas Assurance Co., Ltd., Sydney.
Australian Alliance Assurance Co., Sydney.
Australian Mutual Fire Insurance Society Ltd., Sydney.
British Equitable Assurance Co., Ltd., Sydney
City Mutual Insurance Co., Ltd., Sydney.
Colonial Mutual Fire Insurance Co., Ltd., Sydney.
Commercial Union Assurance Co., Sydney.
Co-operative Insurance Co. of Australia Ltd., Sydney.
Eagle, Star, and British Dominions Insurance Co., Ltd., Sydney.
Employers' Liability Assurance Corporation Ltd., Sydney.
Farmers' and Settlers' Co-op. Insurance Co. of Australia Ltd., Sydney.
Federal Insurance Co., Ltd., Sydney.
Insurance Office of Australia Ltd., Sydney.
Liverpool and London and Globe Insurance Co., Ltd., Sydney.
London Guarantee and Accident Co., Ltd., Sydney.
London and Lancashire Fire Insurance Co., Ltd., Sydney.
Manufacturers' Mutual Accident Assurance Assn. Ltd, Sydney.
Mercantile Mutual Fire Insurance Co., Ltd., Sydney.
New Zealand Insurance Co., Ltd., Sydney.
North British and Mercantile Insurance Co., Ltd., Sydney.
Phœnix Assurance Co., Ltd., Sydney.
Queensland Insurance Co., Sydney.
Royal Exchange Insurance, Sydney.
Royal Insurance Co., Ltd., Sydney.
Southern Insurance Association Ltd., Sydney.
Standard Fire and Marine Insurance Co. of New Zealand Ltd., Sydney.
Sydney Fire Office Ltd., Sydney.
The South British Insurance Co., Ltd., Sydney.
Union Assurance Society Ltd., Sydney.
Union Marine Insurance Co., Ltd., Sydney.
United Insurance Co., Ltd. Sydney.
Yorkshire Insurance Co., Ltd., Sydney.

Appendix I.

Persons employed, by Class of Factory, Classified by Industry—1929.

THE STATE.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
CLASS 1.—TREATING RAW MATERIAL, THE PRODUCT OF PASTORAL PURSUITS.												
(*a*) *Animal Products*												
Boiling-down and tallow-refining	7	...	...	1	...	2	...	62	...	65	...	65
Glue	1	2	1	4	19	5	11	93	31	104	62	166
Tanning	59	23	...	27	...	32	...	724	2	806	2	808
Wool-scouring and fellmongering	29	8	...	28	3	51	30	552	49	639	82	721
Other animal products	17	38	...	63	...	50	...	333	...	484	...	484
Total	113	71	1	123	22	140	41	1,764	82	2,098	146	2,244
(*b*) *Vegetable Products.*												
Chaff-cutting	79	1	...	1	...	12	...	263	...	277	...	277
Total, Class 1	192	72	1	124	22	152	41	2,027	82	2,375	146	2,521
CLASS 2.—OILS AND FATS—ANIMAL AND VEGETABLE.												
Oil and grease	9	4	...	13	...	14	...	101	...	132	...	132
Soap, candles, &c.	16	25	19	48	36	75	42	314	65	462	162	624
Total, Class 2	25	29	19	61	36	89	42	415	65	594	162	756
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &C.												
Asphalt	26	2	...	22	...	20	...	154	...	198	...	198
Bricks and tiles	151	132	...	229	...	250	1	2,568	9	3,179	10	3,189
Glass and glass bottles	8	29	...	64	...	70	...	632	...	795	...	795
Glass (ornamental)	38	33	...	120	...	114	...	450	...	717	...	717
Lime, plaster, and cement	17	2	...	6	...	17	...	671	...	696	...	696
Marble and slate	16	1	...	7	...	16	...	120	...	154	...	154
Modelling and fibrous plaster	45	6	...	27	...	34	...	213	...	280	...	280
Monumental masonry	28	...	...	18	...	29	...	337	...	384	...	384
Pottery and earthenware	16	38	...	61	...	49	2	398	1	546	3	549
Stone-dressing	46	1	...	13	...	28	...	607	...	649	...	649
Other works	21	2	...	10	...	34	...	327	...	373	...	373
Total, Class 3	412	246	...	577	...	661	3	6,487	10	7,971	13	7,984
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	3	1	...	2	...	1	...	18	...	22	...	22
Boxes and packing-cases	60	26	2	56	7	79	18	589	16	750	43	793
Cooperage	10	4	...	12	...	18	...	204	...	238	...	238
Joinery	397	93	5	368	1	451	5	2,662	10	3,574	21	3,595
Saw-milling—Timber	425	41	...	171	...	245	...	2,862	...	3,319	...	3,319
Firewood	193	2	...	3	...	13	...	293	...	311	...	311
Wood-turning	15	3	1	20	4	14	1	70	2	107	8	115
Other works	42	9	13	22	4	49	5	259	11	339	33	372
Total, Class 4	1,145	179	21	654	16	870	29	6,957	39	8,660	105	8,765
CLASS 5.—METAL WORKS, MACHINERY, &C.												
Agricultural implements	15	6	...	22	...	20	...	190	...	238	...	238
Brass and copper	82	54	7	155	20	201	21	1,062	19	1,472	67	1,539
Cutlery	28	4	8	22	8	31	2	183	6	240	24	264
Engineering	354	238	1	733	6	982	5	5,868	8	7,821	20	7,841
Galvanised iron	47	40	...	142	...	163	...	1,021	...	1,366	...	1,366
Iron works, foundries, and boilermaking	216	96	2	463	2	628	4	7,645	13	8,832	21	8,853
Iron safes and doors	6	8	...	23	...	13	...	64	...	108	...	108
Lead-mills	2	...	...	...	...	...	...	6	...	6	...	6
Railway carriage works	3	...	...	10	...	4	...	96	1	110	1	111
Smelting and ore dressing	4	...	...	8	...	17	...	418	...	443	...	443
Stoves and ovens	10	25	8	52	7	74	17	599	27	750	59	809
Tinsmithing	26	95	48	184	89	164	107	499	127	942	371	1,313
Wire-working	31	59	...	122	...	269	1	1,264	4	1,714	5	1,719
Other metal works	114	139	24	261	29	220	40	1,118	19	1,738	112	1,850
Plumbing	29	10	...	18	...	41	...	317	...	386	...	386
Farriery	11	3	...	5	...	6	...	73	...	87	...	87
Total, Class 5	978	777	98	2,220	161	2,833	197	20,423	224	26,253	680	26,933
CLASS 6.—CONNECTED WITH FOOD AND DRINK AND THE PREPARATION THEREOF.												
(*a*) *Animal Food.*												
Bacon	22	4	...	5	...	11	7	203	...	223	7	230
Butchers' smallgoods	1,250	20	1	55	...	74	...	1,668	17	1,817	18	1,835
Margarine	2	1	...	13	...	28	...	88	...	130	...	130
Meat-preserving	13	8	...	21	7	26	7	461	43	516	57	573
Total	1,287	33	1	94	7	139	14	2,420	60	2,686	82	2,768

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total
CLASS 6.—CONNECTED WITH FOOD AND DRINK AND THE PREPARATION THEREOF—*continued.*												
(b) Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.												
Biscuits	9	145	180	134	216	121	275	375	360	775	1,031	1,806
Bread and pastry	1,537	67	12	467	43	508	47	3,063	326	4,105	428	4,533
Confectionery	178	84	262	118	356	130	330	792	408	1,124	1,356	2,480
Corn-flour and oatmeal	16	17	33	30	49	49	37	226	43	322	162	484
Flour-milling	54	2	3	29	2	47	2	597	...	675	7	682
Jam and fruit preserving	33	7	8	24	39	47	17	228	126	306	190	496
Pickles, sauces, and vinegar	13	5	2	12	1	19	4	83	40	119	47	166
Poultry foods and dog biscuits	14	5	...	12	6	15	5	157	3	189	14	203
Self-raising flour	4	3	8	5	12	1	15	10	6	19	41	60
Sugar-refining	7	3	3	7	6	15	3	587	9	612	21	633
Total	1,865	338	511	838	730	952	735	6,118	1,321	8,246	3,297	11,543
(c) Drinks and Stimulants.												
Aerated waters and cordials	179	15	2	100	20	113	15	521	30	749	67	816
Brewing	12	2	...	8	...	15	...	654	...	679	...	679
Condiments, coffee, spices, &c.	39	16	56	45	142	40	169	273	219	374	586	960
Distillery	1	...	...	...	...	...	...	10	...	10	...	10
Ice and refrigerating	227	14	...	54	...	42	...	879	1	989	1	990
Tea blending and packing	13	20	22	18	29	12	32	119	67	169	150	319
Wine, spirits, and beer bottling	57	2	...	32	1	33	14	450	48	517	63	580
Total	528	69	80	257	192	255	230	2,906	365	3,487	867	4,354
(d) Narcotics.												
Tobacco, cigars, and cigarettes	8	45	165	57	233	63	343	642	721	807	1,462	2,269
Total, Class 6	3,688	485	757	1,246	1,162	1,409	1,322	12,086	2,467	15,226	5,708	20,934
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(a) Textile.												
Woollen mills	30	180	332	174	356	168	537	631	1,081	1,153	2,306	3,459
(b) Dress.												
Boots and shoes :—Order made	774	36	8	66	20	86	17	1,073	47	1,261	92	1,353
Factory made	95	133	313	221	368	202	339	1,771	916	2,327	1,936	4,263
Clothing :—Men's slops	49	23	263	24	421	51	434	397	1,113	495	2,231	2,726
Women's slops	155	9	421	18	547	21	601	198	1,582	246	3,151	3,397
Tailoring	312	28	192	56	403	70	494	869	1,747	1,023	2,836	3,859
Corsets	5	1	61	2	106	3	166	17	259	23	592	615
Dressmaking and millinery :—												
Makers' material	264	13	539	11	709	16	829	130	1,586	170	3,663	3,833
Customers' material	126	...	73	1	121	3	100	51	306	55	600	655
Dye works	38	13	8	24	30	41	42	325	96	403	176	579
Furriery	29	8	11	26	30	29	59	76	76	139	176	315
Hats and caps	28	28	61	37	134	63	158	276	286	404	639	1,043
Hosiery and knitting	72	51	461	120	585	168	743	439	1,123	778	2,912	3,690
Oilskin and waterproof clothing	8	...	2	3	6	4	9	17	35	24	52	76
Shirts, ties, and scarves	55	11	379	29	336	18	390	99	724	157	1,829	1,986
Umbrellas	6	2	2	2	11	2	17	25	45	31	75	106
Underclothing	140	11	396	11	429	20	531	84	787	126	2,053	2,179
Wigs and hair work	5	...	...	1	7	...	6	3	6	4	19	23
Total	2,161	367	3,100	652	4,263	797	4,935	5,850	10,734	7,666	23,032	30,698
(c) Fibrous Materials and Textiles not elsewhere included.												
Bags and sacks	10	17	28	33	44	27	17	152	59	229	148	377
Rope and twine	4	13	9	22	13	6	13	30	10	71	45	116
Tents and tarpaulins	19	5	13	10	16	12	25	52	88	79	142	221
Total	33	35	50	65	73	45	55	234	157	379	335	714
Total, Class 7	2,224	582	3,482	891	4,692	1,010	5,527	6,715	11,972	9,198	25,673	34,871
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	25	11	5	48	8	75	3	252	14	386	30	416
Electrotyping and stereotyping, type founding, and printers' materials	9	4	3	15	2	16	2	196	4	231	11	242
Paper bags and boxes	21	71	226	62	251	97	251	294	358	524	1,086	1,610
Paper mills, cardboard, and strawboard	6	14	16	19	22	30	36	193	99	256	173	429
Photo.-engraving, photo.-lithography, and photo. materials	46	4	23	26	50	31	77	115	231	176	381	557
Printing, bookbinding, and manufacturing stationery	570	336	230	622	384	780	409	4,761	895	6,499	1,918	8,417
Total, Class 8	677	440	503	792	717	1,029	778	5,811	1,601	8,072	3,599	11,671
CLASS 9.—MUSICAL INSTRUMENTS, &C.												
Pianos, organs, and sewing-machines	33	26	9	64	27	81	16	537	48	708	100	808

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	2	...	1	1	2	2	2	13	...	16	5	21
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY, HARNESS, &c.												
Coaches and waggons	127	9	...	59	...	78	...	426	...	572	...	572
Cycles and motor cars	1,188	276	6	408	29	1,180	31	4,699	39	7,063	105	7,168
Perambulators, &c.	5	6	...	5	...	6	...	42	2	59	2	61
Saddlery, harness, &c.	23	5	...	3	8	4	...	109	20	121	28	149
Naves, spokes, &c.	1	...	...	...	...	...	...	2	...	2	...	2
Whips	3	...	...	...	...	1	...	5	1	6	1	7
Total, Class 11	1,347	296	6	975	37	1,269	31	5,283	62	7,823	136	7,959
CLASS 12.—SHIPBUILDING, FITTINGS, &c.												
Docks and slips	2	1	...	...	...	1	...	229	...	231	...	231
Sailmaking	6	...	1	1	...	2	...	13	2	16	3	19
Ship and boat building	28	1	1	18	...	50	...	359	3	428	4	432
Total, Class 12	36	2	2	19	...	53	...	601	5	675	7	682
CLASS 13.—FURNITURE, BEDDING, &c.												
Bedding, flock, and upholstery	87	39	43	108	89	111	96	657	235	915	463	1,378
Carpet-sewing	2	...	3	5	9	6	11	58	50	69	73	142
Iron bedsteads	5	7	...	12	...	14	...	97	...	130	...	130
Billiard tables	...	...	...	...	...	...	...	...	...	...	...	...
Chair-making	18	6	2	17	4	39	...	177	1	239	7	246
Furniture and cabinet making—												
European	253	95	6	220	9	392	16	2,074	46	2,781	77	2,858
Chinese	8	...	...	1	...	2	...	49	...	52	...	52
Bamboo and wicker	10	5	...	10	...	13	1	120	...	158	1	159
Picture frames	22	2	1	14	4	17	14	67	22	100	41	141
Window blinds	13	8	...	9	7	7	4	48	23	72	34	106
Total, Class 13	418	162	55	396	122	611	142	3,347	377	4,516	696	5,212
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c.	17	11	17	15	55	17	55	132	88	175	215	390
Chemical works and drugs	70	56	84	80	136	63	116	460	171	659	507	1,166
Fertilisers	5	...	...	3	...	3	...	55	...	61	...	61
Perfumes and essences	21	2	26	14	44	13	53	27	28	56	151	207
Paints and varnishes	21	41	6	62	27	60	23	406	25	569	81	650
Other Minor Works	11	2	...	10	2	6	2	82	4	100	8	108
Total, Class 14	145	112	133	184	264	162	249	1,162	316	1,620	962	2,582
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	34	2	...	10	3	33	1	114	6	159	10	169
Surgical instruments	11	3	...	5	3	7	2	40	6	55	11	66
Other Minor Works	4	...	...	1	...	2	...	5	...	8	...	8
Total, Class 15	49	5	...	16	6	42	3	159	12	222	21	243
CLASS 16.—TIMEPIECES, JEWELLERY, AND PLATEDWARE.												
Electroplating	43	14	...	39	3	32	...	190	1	275	4	279
Jewellery	70	10	4	19	16	38	18	292	36	359	74	433
Total, Class 16	113	24	4	58	19	70	18	482	37	634	78	712
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	127	112	14	405	36	637	70	1,586	127	2,740	247	2,987
Electric light and power works	288	13	7	22	1	46	3	856	2	937	13	950
Gas works	43	6	...	22	...	35	...	1,317	...	1,380	...	1,380
Lamps and gas mantles	10	8	25	6	56	8	74	42	63	64	218	282
Hydraulic power	2	...	...	...	...	1	...	13	...	14	...	14
Coke works	7	1	...	7	...	8	...	189	...	205	...	205
Total, Class 17	477	140	46	452	93	735	147	4,003	192	5,340	478	5,818
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy Leather	16	29	71	44	99	38	96	312	123	423	379	802
Leather belting	4	3	..	3	...	2	...	13	...	21	...	21
Portmanteaux	9	11	4	13	6	13	4	61	6	98	20	118
Other Minor Works	22	16	33	18	38	14	32	78	71	126	174	300
Total, Class 18	51	59	108	78	143	67	122	464	200	668	573	1,241
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting	5	2	...	1	...	2	...	14	...	19	...	19
Brooms, brushes	37	39	22	27	76	51	125	202	44	319	267	586
Florists and seedsmen	8	5	13	...	8	2	5	20	11	27	37	64
Laundries—European	142	5	85	20	237	25	285	232	960	282	1,568	1,850
Chinese	19	...	...	...	1	...	...	22	3	22	4	26
Rubber goods	10	3	9	26	26	85	44	708	87	822	166	988
Toys	16	6	...	20	5	10	6	46	...	82	11	93
Painting and sign-writing	19	8	...	27	4	28	1	353	4	416	9	425
Other Minor Works	42	52	53	80	76	99	63	547	132	787	324	1,111
Total, Class 19	297	120	183	210	433	302	529	2,144	1,241	2,776	2,386	5,162
Total, all Industries	12,310	3,756	5,428	9,028	7,952	11,447	9,198	79,116	18,950	103,347	41,528	144,875

Appendix II.

Factories, by Number of Persons employed—1925-1929.

Year	Number of Factories in which the number of persons employed is— Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	Total.
Metropolitan District.																	
1925	3,310	1,733	828	353	187	198	106	59	73	32	29	8	8	8	5	5	6,947
1926	2,970	1,841	851	383	217	219	123	58	82	31	32	9	7	7	4	3	6,837
1927	3,043	1,790	843	375	235	236	118	72	64	39	27	16	3	11	2	3	6,877
1928	3,028	1,837	850	374	237	218	105	63	71	33	16	17	5	10	3	4	6,876
1929	3,474	1,864	846	354	252	226	112	52	66	29	26	10	5	13	2	2	7,333
Newcastle District.																	
1925	784	295	95	29	15	10	4	3	3	1	1	2	...	1	1	1	1,245
1926	755	298	100	23	18	7	7	1	2	2	...	1	2	...	...	1	1,217
1927	723	280	81	28	12	8	2	2	5	2	1	...	1	...	1	1	1,147
1928	748	291	82	23	14	8	2	2	3	4	1	..	1	1	...	1	1,181
1929	875	305	80	23	6	12	1	2	3	1	2	...	1	1	...	1	1,314
Rest of State.																	
1925	2,616	786	177	33	9	6	4	2	3	2	2	1	...	2	1	...	3,644
1926	2,618	882	207	34	10	6	5	3	3	2	3	1	...	...	1	...	3,775
1927	2,317	842	170	28	10	5	2	2	4	3	3	..	2	1	...	...	3,389
1928	2,313	839	159	20	6	10	2	2	6	2	2	...	2	...	1	...	3,364
1929	2,655	787	164	26	5	10	2	4	1	3	3	2	..	...	1	...	3,663
State.																	
1925	6,710	2,813	1,100	415	211	214	114	64	79	35	32	11	8	11	7	6	11,836
1926	6,343	3,021	1,158	440	245	232	135	62	87	35	35	11	9	7	5	4	11,829
1927	6,083	2,912	1,094	431	257	249	122	76	73	44	31	16	6	12	3	4	11,413
1928	6,089	2,977	1,091	417	257	236	109	72	80	39	19	17	8	11	4	5	11,421
1929	7,004	2,957	1,090	403	263	248	115	58	70	33	31	12	6	14	3	3	12,310

Appendix III.

Factories, by Class and Number of Persons employed, 1929.

Class of Factory.	Number of Factories in which the number of persons employed is— Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	Total.
Metropolitan District.																	
I. Treating raw material, product of pastoral pursuits	31	31	24	6	6	5	4	2	1	1	...	...	...	...	...	...	111
II. Oils and fats—animal and vegetable, &c.	2	2	...	3	1	1	...	...	...	1	...	1	...	...	...	...	11
III. Processes relating to stone, clay, glass, &c. ...	43	75	41	29	25	19	3	3	2	1	2	1	...	1	...	...	245
IV. Working in wood	210	148	51	14	11	13	2	2	2	...	1	...	...	...	...	...	454
V. Metal works, machinery, &c.	287	232	120	52	33	21	18	7	9	5	3	...	1	4	...	...	795
VI. Connected with food and drink, &c.	1,246	275	95	32	22	18	17	6	7	2	3	3	...	3	1	1	1,731
VII. Clothing and textile fabrics, &c.	836	425	211	95	76	75	34	18	25	10	7	3	2	3	...	1	1,821
VIII. Books, paper, printing, engraving, &c.	132	133	82	38	24	20	8	5	5	4	4	1	1	1	...	...	464
IX. Musical instruments, &c.	6	4	7	5	3	1	...	...	1	...	1	...	...	...	...	...	28
X. Arms and explosives	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2
XI. Vehicles and fittings, saddlery, harness, &c. ...	278	154	44	16	12	14	6	2	2	...	1	...	1	...	...	...	530
XII. Ship and boat building, &c.	17	8	2	1	...	1	2	...	...	...	...	...	...	...	...	...	31
XIII. Furniture, bedding, &c.	122	116	57	18	12	13	5	1	5	...	...	...	...	...	...	...	349
XIV. Drugs, chemicals, and by-products	34	55	25	4	4	7	2	3	1	2	1	...	...	...	...	...	138
XV. Surgical and other scientific instruments	22	13	5	3	...	...	...	...	...	...	...	...	...	...	...	...	43
XVI. Jewellery and plated-ware, &c.	54	34	15	2	1	...	...	...	...	...	...	...	...	...	...	...	106
XVII. Heat, light and power	73	49	20	11	6	5	6	1	4	...	1	1	...	...	1	...	178
XVIII. Leatherware (excepting saddlery and harness) ..	10	17	6	7	4	2	1	2	...	2	...	...	...	...	...	...	51
XIX. Minor wares not elsewhere included	70	87	40	18	12	8	4	...	2	1	2	...	...	1	...	...	245
Total	3,474	1,864	846	354	252	226	112	52	66	29	26	10	5	13	2	2	7,333
Newcastle District.																	
I. Treating raw material, product of pastoral pursuits	12	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	13
II. Oils and fats—animal and vegetable, &c.	1	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	4
III. Processes relating to stone, clay, glass, &c. ...	18	13	10	5	2	...	...	...	...	...	...	...	...	...	...	...	48
IV. Working in wood	98	51	15	4	1	...	...	...	...	...	...	...	...	...	...	...	169
V. Metal work, machinery, &c.	40	19	7	3	3	3	...	1	...	1	...	2	...	1	1	...	81
VI. Connected with food and drink, &c.	422	68	15	3	...	...	1	...	1	...	...	...	...	...	...	...	510
VII. Clothing and textile fabrics, &c.	82	46	12	5	...	2	...	1	...	...	...	...	...	...	...	...	148
VIII. Books, paper, printing engraving, &c.	13	20	5	1	...	3	...	...	...	...	...	...	...	...	...	...	42
IX. Musical instruments, &c.	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
X. Arms and explosives	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XI. Vehicles and fittings, saddlery, harness, &c. ...	93	57	7	1	...	...	...	...	...	...	...	...	...	...	...	...	161
XII. Ship and boat building, &c.	3	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XIII. Furniture, bedding, &c.	22	10	3	...	...	2	...	...	...	...	...	...	...	...	...	...	37
XIV. Drugs, chemicals, and by-products	3	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XV. Surgical and other scientific instruments	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XVI. Jewellery and plated-ware, &c.	6	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7
XVII. Heat, light and power	46	9	3	1	...	1	...	...	2	...	...	...	...	...	...	...	62
XVIII. Leatherware (excepting saddlery and harness) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XIX. Minor wares not elsewhere included	9	4	2	...	...	1	...	...	...	...	...	...	...	...	...	...	16
Total	875	306	80	23	6	12	1	2	3	1	2	...	1	1	...	1	1,314

Appendix III—*continued.*

Class of Factory.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750	750 and under 1,000.	1,000 and over.	
Rest of State.																	
I. Treating raw material, product of pastoral pursuits	29	30	9	...	...	...	...	...	...	...	...	...	...	...	...	...	68
II. Oils and fats—animal, vegetable, &c.	7	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	10
III. Processes relating to stone, clay, glass, &c. ...	46	49	14	4	...	3	...	...	...	2	...	1	...	...	...	...	119
IV. Working in wood	313	151	48	6	2	2	...	...	...	...	...	...	...	...	...	...	522
V. Metal work, machinery, &c.	64	26	7	1	...	...	...	...	...	...	2	1	...	...	1	...	102
VI. Connected with food and drink, &c.	1,269	143	25	4	1	1	...	3	1	...	...	...	...	...	...	...	1,447
VII. Clothing and textile fabrics, &c.	157	81	10	1	...	1	2	1	...	1	1	...	...	...	...	...	255
VIII. Books, paper, printing, engraving, &c.	97	53	15	4	...	2	...	...	...	...	...	...	...	...	...	...	171
IX. Musical Instruments, &c.	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
X. Arms and explosives...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XI. Vehicles and fittings, saddlery, harness, &c. ...	446	193	16	...	1	...	...	...	...	...	...	...	...	...	...	...	656
XII. Ship and boat building, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XIII. Furniture, bedding, &c.	26	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	32
XIV. Drugs, chemicals, and by-products	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	2
XV. Surgical and other scientific instruments	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XVI. Jewellery and plated-ware, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XVII. Heat, light and power	183	36	13	4	1	...	...	...	...	...	...	...	...	...	...	...	237
XVIII. Leatherware (excepting saddlery and harness) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XIX. Minor wares, not elsewhere included	14	16	5	1	...	1	...	...	...	...	...	...	...	...	...	...	37
Total	2,655	787	164	26	5	10	2	4	1	3	3	2	...	...	1	...	3,66
The State.																	
I. Treating raw materials, product of pastoral pursuits	72	61	33	6	6	5	4	2	1	2	...	...	...	...	...	...	192
II. Oils and fats—animal, vegetable, &c.	10	6	2	3	1	1	...	...	...	1	...	1	...	...	...	...	25
III. Processos relating to stone, clay, glass, &c. ...	107	137	65	38	27	22	3	3	2	3	2	2	...	1	...	...	412
IV. Working in wood	621	350	114	24	14	15	2	2	2	...	1	...	...	...	...	...	1,145
V. Metal works, machinery, &c.	391	277	134	56	36	27	18	8	9	5	7	1	2	5	1	1	978
VI. Connected with food and drink, &c.	2,937	486	135	39	23	19	18	9	9	2	3	3	...	3	1	1	3,688
VII. Clothing and textile fabrics, &c.	1,075	552	233	101	76	78	36	20	25	11	8	3	2	3	...	1	2,224
VIII. Books, paper, printing, and engraving, &c. ...	243	211	102	43	24	25	8	5	5	4	4	1	1	1	...	...	677
IX. Musical instruments, &c.	8	7	7	5	3	1	...	...	1	...	1	...	...	...	...	...	33
X. Arms and explosives	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2
XI. Vehicles and fittings, saddlery and harness, &c. ...	820	404	67	17	15	14	6	2	2	...	1	...	1	...	...	...	1,347
XII. Ship and boat building, &c.	20	10	2	1	...	1	2	...	...	...	...	...	...	...	...	...	36
XIII. Furniture, bedding, &c.	170	132	60	18	12	15	5	1	5	...	...	...	...	...	...	...	418
XIV. Drugs, chemicals, and by-products	37	57	26	5	4	7	2	3	1	2	1	...	...	...	...	...	145
XV. Surgical and othor scientific instruments	28	13	5	3	...	...	...	...	...	...	...	...	...	...	...	...	49
XVI. Jewellery and plated-ware, &c.	60	35	15	2	1	...	...	...	...	...	...	...	...	...	...	...	113
XVII. Heat, light, and power	302	94	36	16	6	6	6	1	6	...	1	1	...	...	1	...	477
XVIII. Leatherware, excepting saddlery and harness ...	10	17	6	7	5	2	1	2	...	2	...	...	...	...	...	...	51
XIX. Minor wares, not elsewhere included	93	107	47	19	12	10	4	...	2	1	2	...	...	1	...	...	298
Total	7,004	2,957	1090	403	263	248	115	58	70	33	31	12	6	14	3	3	12,310

Appendix IV.

Persons employed, by Class of Factory, Classified by Industry—1929.

Metropolitan District.

Class of Factory.	Number of Factories on Register.	Persons employed.									
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.	
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Class 1.—Treating Raw Material, the Product of Pastoral Pursuits.												
(a) *Animal Products.*												
Boiling-down and tallow-refining	6	...	...	...	...	1	...	52	...	53	...	53
Glue	1	2	1	4	19	5	11	93	31	104	62	166
Tanning	55	23	...	27	...	30	...	697	2	777	2	779
Wool-scouring and fellmongering	19	7	...	27	3	46	30	494	49	574	82	656
Other animal products	13	24	...	28	...	29	...	226	...	307	...	307
Total	94	56	1	86	22	111	41	1,562	82	1,815	146	1,961
(b) *Vegetable Products*												
Chaff-cutting	17	1	...	1	...	2	...	40	...	44	...	44
Total, Class 1	111	57	1	87	22	113	41	1,602	82	1,859	146	2,005
Class 2.—Oils and Fats—Animal and Vegetable.												
Oil and grease	7	4	...	13	...	14	...	94	...	125	...	125
Soap, candles, &c.	4	22	19	44	35	68	42	274	63	408	159	567
Total, Class 2	11	26	19	57	35	82	42	368	63	533	159	692

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.												
Asphalt	22	2	...	18	...	17	...	98	...	135	...	135
Bricks and tiles	71	129	...	195	...	199	1	1,989	9	2,512	10	2,522
Glass and glass bottles	7	29	...	64	...	70	...	631	...	794	...	794
Glass (ornamental)	34	33	...	115	...	108	...	438	...	694	...	694
Lime, plaster, and cement	5	2	...	1	...	8	...	34	...	45	...	45
Marble and slate	15	1	...	7	...	16	...	127	...	151	...	151
Modelling and fibrous plaster	26	3	...	17	...	20	...	143	...	183	...	183
Monumental masonry	16	...	...	13	...	21	...	294	...	328	...	328
Pottery and earthenware	13	38	...	61	...	47	2	384	1	530	3	533
Stone-dressing	16	1	...	6	...	22	...	222	...	251	...	251
Other works	20	...	...	10	...	34	...	326	...	370	...	370
Total, Class 3	245	238	...	507	...	562	3	4,686	10	5,993	13	6,006
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	2	1	...	...	...	1	...	11	...	13	...	13
Boxes and packing-cases	49	25	2	52	7	64	18	568	15	709	42	751
Cooperage	9	4	...	11	...	17	...	187	...	219	...	219
Joinery	241	76	5	267	1	293	5	2,050	10	2,686	21	2,707
Saw-milling—Timber	66	18	...	81	...	114	...	848	...	1,061	...	1,061
Firewood	36	2	...	...	...	4	...	66	...	72	...	72
Wood-turning	15	3	1	20	4	14	1	69	2	106	8	114
Other works	36	6	13	16	4	36	5	214	11	272	33	305
Total, Class 4	454	135	21	447	16	543	29	4,013	38	5,138	104	5,242
CLASS 5.—METAL WORKS, MACHINERY, &c.												
Agricultural implements	12	5	...	22	...	19	...	180	...	226	...	226
Brass and copper	77	50	7	135	15	160	8	728	6	1,073	36	1,109
Cutlery	26	3	8	18	8	24	2	156	6	201	24	225
Engineering	288	207	1	643	6	874	5	5,027	8	6,751	20	6,771
Galvanised iron	40	38	...	109	...	114	...	588	...	849	...	849
Iron works, foundries, and boilermaking	157	74	2	313	2	426	4	3,977	13	4,790	21	4,811
Iron safes and doors	6	8	...	23	...	13	...	64	...	108	...	108
Lead-mills	2	...	...	...	...	...	...	6	...	6	...	6
Railway carriage works	2	...	...	10	...	4	...	80	1	94	1	95
Smelting and ore dressing	2	...	...	...	...	...	...	9	...	9	...	9
Stoves and ovens	9	25	8	50	7	72	17	588	27	735	59	794
Tinsmithing	20	92	48	181	89	158	107	480	127	911	371	1,282
Wire-working	28	39	...	72	...	183	1	688	4	982	5	987
Other metal works	105	131	24	249	29	216	40	1,088	19	1,684	112	1,796
Plumbing	13	4	...	11	...	17	...	228	...	260	...	260
Farriery	8	...	...	1	...	...	...	19	...	20	...	20
Total, Class 5	795	676	98	1,837	156	2,280	184	13,906	211	18,699	649	19,348
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(a) *Animal Food.*												
Bacon	9	1	...	4	...	10	7	120	...	135	7	142
Butchers' smallgoods	659	15	1	38	...	38	...	923	17	1,014	18	1,032
Margarine	2	1	...	13	...	28	...	88	...	130	...	130
Meat-preserving	7	8	...	19	7	17	7	401	43	445	57	502
Total	677	25	1	74	7	93	14	1,532	60	1,724	82	1,806
(b) *Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.*												
Biscuits	5	141	175	128	202	107	252	298	336	674	965	1,639
Bread and pastry	610	40	12	292	36	310	43	1,734	257	2,376	348	2,724
Confectionery	131	82	259	113	347	121	325	735	396	1,051	1,327	2,378
Corn-flour and oatmeal	12	12	31	15	36	33	28	170	40	230	135	365
Flour-milling	14	...	3	7	2	21	2	303	...	331	7	338
Jam and fruit preserving	21	6	6	22	34	41	16	177	115	246	171	417
Pickles, sauces, and vinegar	10	5	2	11	1	18	4	77	40	111	47	158
Poultry foods and dog biscuits	14	5	...	12	6	15	5	157	3	189	14	203
Self-raising flour	4	3	8	5	12	1	15	10	6	19	41	60
Sugar-refining	3	...	3	...	6	10	3	310	9	320	21	341
Total	824	294	499	605	682	677	693	3,971	1,202	5,547	3,076	8,623
(e) *Drinks and Stimulants.*												
Aerated waters and cordials	34	1	2	47	16	57	15	227	26	332	59	391
Brewing	7	1	...	5	...	13	...	614	...	633	...	633
Condiments, coffee, spices, &c.	32	15	50	42	126	38	161	256	214	351	551	902
Distillery	1	...	...	...	...	...	...	10	...	10	...	10
Ice and refrigerating	107	10	...	37	...	20	...	490	1	557	1	558
Tea blending and packing	13	20	22	18	29	12	32	119	67	169	150	319
Wine, spirits, and beer bottling	28	1	...	26	1	27	11	371	47	425	62	487
Total	222	48	74	175	172	167	222	2,087	355	2,477	823	3,300
(d) *Narcotics.*												
Tobacco, cigars, and cigarettes	8	45	165	57	233	63	343	642	721	807	1,462	2,269
Total, Class 6	1,731	412	739	911	1,094	1,000	1,272	8,232	2,338	10,555	5,443	15,998

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males	Females.	Males.	Females.	Total.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(a) *Textile.*												
Woollen mills...	26	148	270	137	284	147	432	556	960	988	1,946	2,934
(b) *Dress.*												
Boots and shoes—Order made	598	27	8	47	19	58	16	832	46	964	89	1,053
Factory made	91	129	310	215	364	197	333	1,707	891	2,248	1,898	4,146
Clothing—Men's slops	42	23	232	23	390	48	405	375	1,066	469	2,093	2,562
Women's slops	152	8	406	18	521	21	586	196	1,567	243	3,080	3,323
Tailoring	178	23	169	45	329	54	363	614	1,450	736	2,311	3,047
Corsets	4	1	61	2	106	3	166	15	258	21	591	612
Dressmaking and millinery—												
Makers' material	233	13	516	11	666	15	786	126	1,512	165	3,480	3,645
Customers' material	113	...	70	1	110	3	91	33	286	37	557	594
Dye works	30	13	6	20	27	40	37	297	90	370	160	530
Furriery	26	8	11	26	28	29	58	72	74	135	171	306
Hats and caps	28	28	61	37	134	63	158	276	286	404	639	1,043
Hosiery and knitting	69	51	460	120	583	168	740	436	1,120	775	2,903	3,678
Oilskin and waterproof clothing	8	...	2	3	6	4	9	17	35	24	52	76
Shirts, ties, and scarves	53	11	372	29	325	16	377	98	715	154	1,789	1,943
Umbrellas	5	2	1	2	8	2	17	24	45	30	71	101
Underclothing	132	11	297	11	419	19	514	81	763	122	1,993	2,115
Wigs and hair work	4	...	...	1	5	...	3	3	4	4	12	16
Total	1,766	348	2,982	611	4,040	740	4,759	5,202	10,208	6,901	21,889	28,790
(c) *Fibrous Materials and Textiles not elsewhere included.*												
Bags and sacks	9	16	28	32	44	16	17	146	59	210	148	358
Rope and twine	4	13	9	22	13	6	13	30	10	71	45	116
Tents and tarpaulins	16	5	13	9	16	10	24	47	87	71	140	211
Total	29	34	50	63	73	32	54	223	156	352	333	685
Total, Class 7 ...	1,821	530	3,302	811	4,397	919	5,145	5,981	11,324	8,241	24,168	32,409
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	24	11	5	47	8	75	3	250	14	383	30	413
Electrotyping and stereotyping, type founding, and printers' materials	7	4	3	15	2	16	2	194	4	229	11	240
Paper bags and boxes	20	71	225	62	248	97	251	294	357	524	1,081	1,605
Paper mills, cardboard, and strawboard ...	6	14	16	19	22	30	36	193	99	256	173	429
Photo-engraving, photo-lithography, and photo. materials	42	4	23	26	47	31	73	112	222	173	365	538
Printing, bookbinding, and manufacturing stationery	365	280	223	517	366	620	389	3,962	859	5,379	1,837	7,216
Total, Class 8	464	384	495	686	693	869	754	5,005	1,555	6,944	3,497	10,441
CLASS 9.—MUSICAL INSTRUMENTS, &c.												
Pianos, organs, and sewing machines ...	28	26	9	61	27	75	16	519	48	681	100	781
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	2	...	1	1	2	2	2	13	...	16	5	21
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY, HARNESS, &c.												
Coaches and waggons	36	5	...	25	...	40	...	194	...	264	...	264
Cycles and motor cars	476	170	6	516	28	725	31	3,212	39	4,623	104	4,727
Perambulators, &c.	4	6	...	5	...	6	...	41	2	58	2	60
Saddlery, harness, &c.	12	5	...	2	7	1	...	67	20	75	27	102
Naves, spokes, &c.	...	...	...	...	...	...	...	...	...	...	...	...
Whips	2	...	...	...	...	1	...	4	1	5	1	6
Total, Class 11	530	186	6	548	35	773	31	3,518	62	5,025	134	5,159
CLASS 12.—SHIPBUILDING FITTINGS, &c.												
Docks and slips	1	...	...	...	...	...	...	227	...	227	...	227
Sailmaking	5	...	1	1	...	2	...	12	2	15	3	18
Ship and boat building	25	1	1	18	...	49	...	349	3	417	4	421
Total, Class 12	31	1	2	19	...	51	...	588	5	659	7	666

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 13.—FURNITURE, BEDDING, &c.												
Bedding, flock, and upholstery	79	39	42	105	87	101	93	629	233	874	455	1,329
Carpet-sewing	2	...	3	5	9	6	11	58	50	69	73	142
Iron bedsteads	5	7	...	12	...	14	...	97	...	130	...	130
Billiard tables	...	...	...	...	...	...	...	...	...	...	...	...
Chair-making	17	6	2	17	4	38	...	176	1	237	7	244
Furniture and cabinet-making—												
European	198	81	5	194	9	351	14	1,881	43	2,507	71	2,578
Chinese	7	...	...	1	...	2	...	48	...	51	...	51
Bamboo and wicker	9	5	...	10	...	23	1	117	...	155	1	156
Picture frames	20	2	1	14	4	17	14	65	22	98	41	139
Window blinds	12	8	...	9	7	7	4	48	22	72	33	105
Total, Class 13	349	148	53	367	120	559	137	3,119	571	4,193	681	4,874
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c.	17	11	17	15	55	17	55	132	88	175	215	390
Chemical works and drugs	68	56	84	79	136	54	116	428	171	617	507	1,124
Fertilisers	4	...	...	3	...	1	...	33	...	37	...	37
Perfumes and essences	21	2	26	14	44	13	53	27	28	56	151	207
Paints and varnishes	20	41	6	62	27	60	23	404	25	567	81	648
Other minor works	8	2	...	10	2	5	2	65	4	82	8	90
Total, Class 14 ..	138	112	133	183	264	150	249	1,089	316	1,534	962	2,496
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	28	1	...	10	3	32	1	107	5	150	9	159
Surgical instruments...	11	3	...	5	3	7	2	40	6	55	11	66
Other minor works	4	...	...	1	...	2	...	5	...	8	...	8
Total, Class 15	43	4	...	16	6	41	3	152	11	213	20	233
CLASS 16.—TIMEPIECES, JEWELLERY, AND PLATED WARE.												
Electroplating	40	13	...	38	3	31	...	186	1	268	4	272
Jewellery	66	10	4	19	16	38	18	287	36	354	74	428
Total, Class 16	106	23	4	57	19	69	18	473	37	622	78	700
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	118	96	14	348	28	559	58	1,366	122	2,369	222	2,591
Electric light and power works	39	7	7	3	1	19	3	309	2	338	13	351
Gas works	8	6	...	21	...	30	...	937	...	994	...	994
Lamps and gas mantles	9	7	8	6	32	7	47	37	35	57	122	179
Hydraulic power	2	...	...	...	...	...	...	10	...	10	...	10
Coke works	2	1	...	...	...	1	...	44	...	46	...	46
Total, Class 17	178	117	29	378	61	616	108	2,703	159	3,814	357	4,171
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy leather	16	29	71	44	99	38	86	312	123	423	379	802
Leather belting	4	3	...	3	...	2	...	13	...	21	...	21
Portmanteaux	9	11	4	13	6	13	4	61	6	98	20	118
Other minor works	22	16	33	18	38	14	32	78	71	126	174	300
Total, Class 18	51	59	108	78	143	67	122	464	200	668	573	1,241
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting ...	5	2	...	1	...	2	...	14	...	19	...	19
Brooms, brushes	32	38	22	25	76	49	125	191	44	303	267	570
Florists and seedsmen	7	5	13	...	8	2	5	18	11	25	37	62
Laundries—European	114	5	64	13	175	18	242	194	870	230	1,351	1,581
Chinese	11	...	...	...	...	...	...	15	2	15	2	17
Rubber goods	8	3	9	22	26	84	44	705	87	814	166	980
Toys	13	6	...	19	5	10	5	43	...	78	10	88
Painting and signwriting	15	7	...	22	4	24	1	313	4	366	9	375
Other minor works	40	43	53	72	76	82	63	527	132	724	324	1,048
Total, Class 19	245	109	161	174	370	271	485	2,020	1,150	2,574	2,166	4,740
Total, all Industries	7,333	3,243	5,181	7,225	7,460	9,042	8,641	58,451	17,980	77,961	39,262	117,223

Appendix V.

Persons employed, by Class of Factory—1925-29.

Class of Factory.	1925.	1926.	1927.	1928.	929
METROPOLITAN DISTRICT.					
I. Treating raw material, product of pastoral pursuits	2,068	2,231	2,334	1,753	2,005
II. Oils and fats—animal, vegetable, &c.	616	770	750	755	692
III. Processes relating to stone, clay, glass, &c.	6,272	6,757	6,497	6,323	6,006
IV. Working in wood	5,046	5,750	5,445	5,761	5,242
V. Metal works, machinery, &c.	18,154	21,028	19,560	20,087	19,348
VI. Connected with food and drink, &c.	14,416	15,650	16,758	16,352	15,998
VII. Clothing and textile fabrics, &c.	29,207	32,694	32,215	32,219	32,409
VIII. Books, paper, printing, engraving, &c.	9,107	9,772	10,209	9,924	10,441
IX. Musical instruments, &c.	695	929	713	738	781
X. Arms and explosives	23	24	18	16	21
XI. Vehicles and fittings, saddlery, harness, &c.	4,950	5,528	4,771	5,099	5,159
XII. Ship and boat building, &c.	960	916	974	465	666
XIII. Furniture, bedding, &c.	5,238	5,576	5,566	5,112	4,874
XIV. Drugs, chemicals, and by-products	2,352	2,523	2,521	2,338	2,496
XV. Surgical and other scientific instruments	236	228	213	206	233
XVI. Jewellery and plated-ware, &c.	946	895	890	1,065	700
XVII. Heat, light, and power	3,527	3,943	4,274	4,587	4,171
XVIII. Leatherware (excepting saddlery and harness)	1,178	1,330	1,118	1,220	1,241
XIX. Minor wares, n.e.i.	4,833	5,439	5,105	6,622	4,740
Total	109,824	121,933	119,931	120,642	117,223
NEWCASTLE DISTRICT.					
I. Treating raw material, product of pastoral pursuits	175	193	216	39	188
II. Oils and fats—animal, vegetable, &c.	150	167	139	92	32
III. Processes relating to stone, clay, glass, &c.	525	564	565	485	431
IV. Working in wood	1,430	1,193	1,062	953	962
V. Metal works, machinery, &c.	5,927	6,379	6,167	5,859	5,081
VI. Connected with food and drink, &c.	1,354	1,549	1,522	1,659	1,442
VII. Clothing and textile fabrics, &c.	1,066	1,108	972	917	867
VIII. Books, paper, printing, engraving, &c.	351	348	408	414	387
IX. Musical instruments, &c.	11	10	13	11	16
XI. Vehicles and fittings, saddlery, harness, &c.	472	514	482	510	623
XII. Ship and boat building, &c.	47	46	30	27	15
XIII. Furniture, bedding, &c.	249	249	256	220	243
XIV. Drugs, chemicals, and by-products	124	61	53	68	29
XV. Surgical and other scientific instruments	6	6	3	5	5
XVI. Jewellery and plated-ware, &c.	10	25	11	12	12
XVII. Heat, light and power	724	505	617	616	769
XVIII. Leatherware (excepting saddlery and harness)	...	...	...	1	...
XIX. Minor wares, n.e.i.	148	104	139	194	146
Total	12,769	13,021	12,655	12,082	11,248
REST OF STATE.					
I. Treating raw material, product of pastoral pursuits	483	471	432	348	328
II. Oils and fats—animal, vegetable, &c.	25	25	23	27	32
III. Processes relating to stone, clay, glass, &c.	1,785	1,342	1,458	1,591	1,547
IV. Working in wood	2,648	2,928	2,554	2,352	2,561
V. Metal work, machinery, &c.	2,491	2,440	2,536	2,065	2,504
VI. Connected with food and drink, &c.	3,493	3,435	3,675	3,890	3,494
VII. Clothing and textile fabrics, &c.	1,519	1,809	1,726	1,612	1,595
VIII. Books, paper, printing, engraving, &c.	741	860	842	781	843
IX. Musical Instruments, &c.	...	...	...	2	11
XI. Vehicles and fittings, saddlery, harness, &c.	1,677	1,964	1,795	1,965	2,177
XII. Ship and boat building, &c.	1	8	1	.....	1
XIII. Furniture, bedding, &c.	152	162	133	105	95
XIV. Drugs, chemicals, and by-products	67	59	70	123	57
XV. Surgical and other scientific instruments	1	1	2	8	5
XVI. Jewellery and plated-ware, &c.	3	6	5	2	.....
XVII. Heat, light and power	806	885	894	758	878
XIX. Minor wares, n.e.i.	197	223	226	245	276
Total	16,094	16,618	16,372	15,874	16,404
STATE.					
I. Treating raw material, product of pastoral pursuits	2,726	2,895	2,982	2,140	2,521
II. Oils and fats—animal, vegetable, &c.	791	962	912	874	756
III. Processes relating to stone, clay, glass, &c.	8,582	8,663	8,520	8,399	7,984
IV. Working in wood	9,124	9,871	9,061	9,066	8,765
V. Metal work, machinery, &c.	26,572	29,847	28,263	28,011	26,933
VI. Connected with food and drink, &c.	19,268	20,634	21,955	21,901	20,934
VII. Clothing and textile fabrics, &c.	31,792	35,611	34,913	34,748	34,871
VIII. Books, paper, printing, engraving, &c.	10,199	10,980	11,459	11,119	11,671
IX. Musical instruments, &c.	706	939	726	751	808
X. Arms and explosives	23	24	18	16	21
XI. Vehicles and fittings, saddlery, harness, &c.	7,099	8,006	7,048	7,574	7,959
XII. Ship and boat building, &c.	1,008	970	1,005	492	682
XIII. Furniture, bedding, &c.	5,639	5,987	5,955	5,437	5,212
XIV. Drugs, chemicals, and by-products	2,543	2,643	2,644	2,529	2,582
XV. Surgical and other scientific instruments	243	235	218	219	243
XVI. Jewellery and plated-ware, &c.	959	926	906	1,079	712
XVII. Heat, light, and power	5,057	5,333	5,785	5,961	5,818
XVIII. Leatherware (excepting saddlery and harness)	1,178	1,330	1,118	1,221	1,241
XIX. Minor wares, n.e.i.	5,178	5,766	5,470	7,061	5,162
Total	138,687	151,622	148,958	148,598	144,875

Appendix VI.

Persons employed, by Age Groups—1925-1929.

METROPOLITAN DISTRICT.

Year.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		Over 21 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1925	6,947	3,044	4,260	6,368	6,555	7,948	7,961	56,736	16,952	74,096	35,728	109,824
1926	6,837	3,666	4,801	7,076	7,268	9,102	9,007	62,674	18,389	82,518	39,465	121,983
1927	6,877	3,462	4,979	7,156	7,387	9,055	8,855	60,723	18,314	80,396	39,535	119,931
1928	6,876	3,398	5,120	7,149	7,226	9,553	8,750	60,141	19,305	80,241	40,401	120,642
1929	7,333	3,243	5,181	7,225	7,460	9,042	8,641	58,451	17,980	77,961	39,262	117,223
NEWCASTLE DISTRICT.												
1925	1,245	201	132	830	225	979	335	9,608	459	11,618	1,151	12,769
1926	1,217	247	153	829	272	918	365	9,758	474	11,752	1,269	13,021
1927	1,147	239	141	808	234	1,031	297	9,483	422	11,561	1,094	12,655
1928	1,181	190	96	786	234	1,031	272	9,010	463	11,017	1,065	12,082
1929	1,314	160	124	698	253	937	273	8,353	450	10,148	1,100	11,248
REST OF STATE.												
1925	3,644	319	94	954	197	1,188	255	12,603	491	15,057	1,037	16,094
1926	3,775	337	136	1,061	241	1,254	309	12,728	552	15,380	1,238	16,618
1927	3,389	391	155	1,139	290	1,424	322	12,107	544	15,061	1,311	16,372
1928	3,364	327	122	1,035	262	1,333	278	12,019	493	14,719	1,155	15,874
1929	3,663	353	123	1,105	239	1,468	284	12,312	520	15,238	1,168	16,404
STATE.												
1925	11,836	3,557	4,486	8,152	6,977	10,115	8,551	78,947	17,902	100,771	37,916	138,687
1926	11,829	4,250	5,095	8,966	7,781	11,274	9,681	85,160	19,415	109,650	41,972	151,622
1927	11,413	4,092	5,275	9,103	7,911	11,510	9,474	82,313	19,280	107,018	41,940	148,958
1928	11,421	3,915	5,338	8,970	7,722	11,922	9,300	81,170	20,261	105,977	42,621	148,598
1929	12,310	3,756	5,428	9,028	7,952	11,447	9,198	79,116	18,950	103,347	41,528	144,875

Appendix VII.

Horse-power of Machinery, by Class of Factory and Method of Production, Classified by Industry, 1929.

METROPOLITAN DISTRICT.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 1.—TREATING RAW MATERIALS, &C.									
Boiling-down and tallow refining	4	54	46	...	...	...	3	78	65
Glue	1	590	490	...	...	...	1	700	420
Tanning	8	265	218	6	383	153	50	2,556	2,095
Woolscouring and fellmongering	8	642	377	...	...	...	18	2,206	1,781
Other animal products	...	...	...	...	...	...	12	147	144
Chaff-cutting	1	6	6	1	20	15	15	458	338
Total	22	1,557	1,137	7	403	168	99	6,145	4,843
CLASS 2.—OILS AND FATS.									
Oil and grease	3	179	159	1	8	8	6	443	414
Soap and candles	4	1,044	364	...	...	...	4	1,625	1,184
Total	7	1,223	523	1	8	8	10	2,068	1,598
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &C.									
Asphalt	1	12	12	1	36	21	19	285	250
Bricks and tiles	18	2,800	1,950	4	439	374	62	10,462	8,593
Glass and glass bottles	2	754	752	...	...	...	6	1,371	1,348
Glass (ornamental)	...	...	...	2	8	7	21	779	730
Lime, plaster, and cement	...	...	...	...	...	...	5	116	116
Marble and slate	...	...	...	2	46	32	12	852	788
Modelling and fibrous plaster	...	...	...	...	...	...	11	67	61
Monumental masonry	...	...	...	1	180	...	4	955	478
Pottery and earthenware	2	75	60	1	6	4	11	1,089	913
Stone-dressing	2	320	320	1	200	200	12	1,046	921
Other works	1	290	130	...	...	...	19	767	714
Total	26	4,251	3,224	12	915	638	182	17,789	14,912
CLASS 4.—WORKING IN WOOD.									
Beehives, &c.	...	...	...	1	5	5	1	8	8
Boxes and packing-cases	4	845	672	1	20	...	46	1,567	1,295
Cooperage	...	...	...	...	...	...	9	249	224
Joinery	6	418	341	12	148	111	222	5,159	4,344
Saw-milling—timber	18	4,363	2,804	1	369	369	55	7,398	5,259
firewood	17	435	343	1	14	10	18	151	143
Wood-turning	...	...	...	...	...	...	15	202	169
Other works	3	193	178	2	23	23	29	475	433
Total	48	6,254	4,338	18	579	518	395	15,209	11,875

Appendix VII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 5.—METAL WORKS, MACHINERY, &c.									
Agricultural implements	...	...	...	2	147	100	10	331	206
Brass and copper	1	52	52	1	3	3	74	1,889	1,526
Cutlery	...	...	...	1	7	7	24	274	246
Engineering	15	3,980	2,943	10	126	96	278	12,688	9,155
Galvanised iron	1	6	6	1	94	52	33	600	461
Iron works, foundries, and boiler-making	5	345	269	4	46	32	145	10,903	8,649
Iron safes and doors	...	...	...	...	...	...	6	253	195
Lead-mills	...	...	...	...	...	...	2	35	35
Railway carriage works	...	...	...	...	...	...	2	447	345
Smelting and ore-dressing	...	...	...	...	...	...	2	29	27
Stoves and ovens	...	...	...	...	...	...	9	2,092	1,502
Tinsmithing	2	56	24	...	...	...	17	864	630
Wire-working	...	...	...	...	...	...	27	3,125	3,075
Other metal works	1	300	300	1	94	50	96	2,379	1,851
Plumbing	...	...	...	...	...	...	11	52	45
Farriery	...	...	...	...	...	...	7	9	9
Total	25	4,379	3,594	20	517	340	743	35,970	27,957
CLASS 6.—CONNECTED WITH FOOD AND DRINK, &c.									
Bacon	4	118	118	...	...	...	9	407	361
Butchers' small-goods	6	65	53	5	44	36	644	3,027	2,791
Margarine	...	...	...	...	...	...	2	419	385
Meat-preserving	3	664	384	2	30	26	7	1,366	1,076
Biscuits	1	25	25	...	...	...	4	1,629	610
Bread and pastry	11	267	162	9	163	73	342	2,411	2,114
Confectionery	8	2,427	1,213	1	2	...	82	4,940	3,202
Corn-flour and oatmeal	1	10	5	...	...	...	11	1,424	1,334
Flour-milling	1	600	450	...	...	...	14	2,702	2,406
Jam and fruit preserving	2	34	34	...	...	...	16	384	350
Pickles, sauces, and vinegar	3	37	16	1	18	...	7	436	326
Dog biscuits and poultry foods	...	...	...	1	188	120	14	943	710
Self-raising flour	...	...	...	...	...	...	3	108	88
Sugar refining	1	255	215	...	...	...	3	3,206	1,658
Aerated waters	2	33	33	1	10	8	28	676	581
Brewing	4	1,200	755	...	...	...	6	5,860	4,238
Condiments, Eastern goods, &c.	5	520	462	...	...	...	29	807	708
Distillery	...	...	...	...	...	...	1	53	32
Ice and refrigerating	10	1,935	1,379	11	1,462	1,011	105	7,793	6,761
Tea-blending	...	...	...	...	...	...	12	288	256
Wines and spirits	...	...	...	1	22	22	22	146	144
Tobacco, cigars, &c.	2	1,958	1,040	...	...	...	8	1,739	894
Total	64	10,148	6,344	32	1,939	1,296	1,369	40,764	31,025
CLASS 7.—CLOTHING AND TEXTILE FABRICS, &c.									
Woollen mills	4	654	614	1	200	180	24	6,341	5,670
Boots and shoes—order and repairing	2	2	2	5	30	27	584	863	777
factory made	...	...	...	1	75	...	89	1,702	1,571
Clothing—men's slops	...	...	...	2	40	39	41	553	515
women's slops	...	...	...	...	...	...	131	350	325
tailoring	...	...	...	...	...	...	82	388	175
Corsets	...	...	...	...	...	...	3	113	107
Dressmaking—makers' materials	1	6	4	...	...	...	108	372	328
customers' materials	...	...	...	...	...	...	51	68	68
Dye works	8	211	152	...	...	...	26	468	372
Furriery	1	6	2	...	...	...	15	124	103
Hats and caps	1	7	7	1	60	20	27	760	437
Hosiery, knitting, &c.	5	50	49	1	2	2	59	1,567	1,453
Oilskins and waterproof clothing	1	6	2	...	...	...	7	27	20
Shirts, ties, and scarves	1	6	2	1	1	1	51	542	499
Umbrellas	...	...	...	...	...	...	5	14	11
Underclothing	1	120	20	...	...	...	99	323	304
Wigs and hairwork	1	25	18	...	...	...	...	...	...
Bags and sacks	...	...	...	...	...	...	6	539	343
Rope and twine	...	...	...	...	...	...	4	328	315
Tents and tarpaulins	...	...	...	...	...	...	15	96	82
Total	26	1,093	872	12	408	269	1,427	15,538	13,475
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.									
Die-sinking and engraving	...	...	...	...	...	...	21	108	101
Electro and stereo-typing, printers' materials, &c.	...	...	...	...	...	...	7	171	150
Paper bags and boxes	1	130	130	1	16	10	19	1,014	867
Paper-mills	...	...	...	...	...	...	5	3,501	3,497
Photo.-engraving, photo. materials, &c.	1	3	3	...	...	...	12	100	87
Printing, bookbinding, and stationery	2	38	38	13	188	142	341	13,675	8,588
Total	4	171	171	14	204	152	405	18,569	13,290
CLASS 9.—MUSICAL INSTRUMENTS, &c.									
Pianos and sewing-machines	1	300	250	...	...	...	24	1,347	1,184
CLASS 10.—ARMS AND EXPLOSIVES.									
Explosives	...	...	...	...	...	...	2	49	32

Appendix VII—*continued.*

Class of Factory	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal	Actually used.
CLASS 11.—VEHICLES, SADDLERY, HARNESS, &c.									
Coaches and waggons ...	...	...	...	1	4	3	28	414	343
Cycles and motor-cars...	8	124	112	10	94	42	443	4,619	4,000
Perambulators ...	...	...	...	...	...	...	4	11	8
Saddlery and harness ...	...	...	...	...	...	...	8	27	22
Naves and spokes	...	...	...	...	...	...	...	...	...
Whips ...	...	...	...	...	...	...	...	...	...
Total ...	8	124	112	11	98	45	483	5,071	4,373
CLASS 12.—SHIPBUILDING, &c.									
Docks and slips	...	...	...	...	...	...	1	25	8
Sailmaking	...	...	...	...	...	...	5	8	8
Ship and boat building	3	298	53	3	35	30	21	679	579
Total ...	3	298	53	3	35	30	27	712	595
CLASS 13.—FURNITURE, BEDDING, &c.									
Bedding and flock	...	...	...	...	...	...	64	1,349	1,233
Carpet-sewing ...	...	...	...	...	...	...	2	30	29
Iron bedsteads	...	...	...	...	...	...	5	474	471
Billiard-tables ...	...	...	...	...	...	...	...	...	...
Chair-making ...	1	50	48	1	5	5	15	427	213
Furniture—European	1	50	50	3	43	38	190	4,849	3,851
Chinese ...	...	...	...	...	...	...	4	67	60
Bamboo and Wicker	...	...	...	...	...	...	3	25	25
Picture frames ...	...	...	...	...	...	...	18	126	125
Window blinds	...	...	...	...	...	...	8	101	56
Total ...	2	100	98	4	48	43	309	7,448	6,063
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.									
Blue, baking-powder, soda, &c.	1	15	15	...	...	...	12	817	619
Chemical works and drugs ...	9	160	144	...	...	...	56	1,704	1,370
Fertilisers	1	12	9	...	...	...	3	130	122
Perfumes and essences	...	...	...	...	...	...	17	168	154
Paints and varnishes ...	...	...	...	...	...	...	20	3,060	1,686
Other minor works	1	6	2	...	...	...	8	831	696
Total ...	12	193	170	...	...	...	116	6,710	4,647
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.									
Optical instruments	...	...	...	...	...	...	25	151	134
Surgical instruments ...	...	...	...	...	...	...	10	43	33
Other minor works	...	...	...	...	...	...	4	5	5
Total ...	...	...	...	...	...	...	39	199	172
CLASS 16.—TIME-PIECES, JEWELLERY, AND PLATED WARE.									
Electro-plating	1	2	2	2	29	...	36	426	388
Jewellery	...	...	...	...	...	...	49	317	241
Total ...	1	2	2	2	29	...	85	743	629
CLASS 17.—LIGHT, HEAT, AND POWER.									
Electrical apparatus ...	...	...	...	...	...	...	111	2,334	1,907
Electric light and power works	4	39,362	21,362	17	1,112	807	31	6,337	6,177
Gas ...	5	2,916	1,512	4	911	648	6	3,765	1,404
Lamps and gas mantles	...	...	...	1	6	6	8	134	105
Hydraulic power	2	1,625	822	...	...	...	2	195	170
Coke works	1	10	10	...	...	...	2	542	431
Total ...	12	43,913	23,706	22	2,029	1,461	160	13,307	10,194
CLASS 18.—LEATHERWARE (EXCEPTING SADDLERY AND HARNESS).									
Fancy leather ...	...	...	...	...	...	...	14	661	623
Leather belting	...	...	...	...	...	...	4	18	14
Portmanteaux and bags	...	...	...	...	...	...	6	21	20
Other minor works	1	5	...	...	...	...	21	200	176
Total ...	1	5	...	...	...	...	45	900	833
CLASS 19.—MINOR WARES (NOT ELSEWHERE INCLUDED).									
Baskets, &c. ...	...	...	...	...	...	...	1	2	1
Brooms and brushes ...	...	...	...	...	...	...	29	240	212
Florists and seedsmen	...	...	...	...	...	...	3	52	34
Laundries—European	16	176	88	2	11	8	108	1,241	1,121
,, Chinese ...	...	...	...	...	...	...	...	...	...
Rubber goods ...	1	200	140	...	...	...	7	5,375	2,871
Toys ...	...	...	...	1	5	3	11	100	80
Painting and signwriting	...	...	...	...	...	...	9	42	36
Other minor works ...	2	485	470	2	46	38	24	1,936	1,462
Total ...	19	951	707	5	62	49	192	8,988	5,817
Total, all Industries ...	281	75,322	45,301	163	7,274	5,017	6,112	197,526	153,514

Appendix VIII.

Horse-power of Machinery used and Method of Production, by Class of Factory, 1929.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
Metropolitan District.									
I. Treating raw materials, product of pastoral pursuits	22	1,557	1,137	7	403	168	99	6,145	4,843
II. Oils and fats—animal, vegetable, &c.	7	1,223	523	1	8	8	10	2,068	1,598
III. Processes in stone, clay, glass, &c.	26	4,251	3,224	12	915	638	182	17,789	14,912
IV. Working in wood	48	6,254	4,338	18	579	518	395	15,209	11,875
V. Metal works, machinery, &c.	25	4,739	3,594	20	517	340	743	35,970	27,957
VI. Connected with food and drink, &c.	64	10,148	6,344	32	1,939	1,296	1,369	40,764	31,025
VII. Clothing and textile fabrics, &c.	26	1,093	872	12	408	269	1,427	15,538	13,475
VIII. Books, paper, printing, and engraving, &c.	4	171	171	14	204	152	405	18,569	13,290
IX. Musical instruments, &c.	1	300	250	...	...	...	24	1,347	1,184
X. Arms and explosives	...	...	...	...	...	...	2	49	32
XI. Vehicles and fittings, saddlery and harness, &c	8	124	112	11	98	45	483	5,071	4,373
XII. Ship and boat building, &c.	3	298	53	3	35	30	27	712	595
XIII. Furniture, bedding, &c.	2	100	98	4	48	43	309	7,448	6,063
XIV. Drugs, chemicals, and by-products	12	193	170	...	...	...	116	6,710	4,647
XV. Surgical and other scientific instruments	...	...	...	...	...	...	39	199	172
XVI. Jewellery and plated-ware, &c.	1	2	2	2	29	...	85	743	629
XVII. Heat, light, and power	12	43,913	23,706	22	2,029	1,461	160	13,307	10,194
XVIII. Leatherware, n.e.i.	1	5	...	...	...	...	45	900	833
XIX. Minor wares, n.e.i.	19	951	707	5	62	49	192	8,988	5,817
Total	281	75,322	45,301	163	7,274	5,017	6,112	197,526	153,514
Newcastle District.									
I. Treating raw materials, product of pastoral pursuits	...	...	...	...	...	...	13	1,179	1,057
II. Oils and fats—animal, vegetable, &c.	3	61	45	...	...	...	2	22	20
III. Processes in stone, clay, glass, &c.	16	1,192	861	...	...	...	23	388	291
IV. Working in wood	69	2,497	2,026	9	62	42	92	1,932	1,508
V. Metal works, machinery, &c.	7	60,154	30,224	5	61	43	61	29,383	21,805
VI. Connected with food and drink, &c.	32	2,742	1,422	22	606	424	297	4,606	3,696
VII. Clothing and textile fabrics, &c.	2	9	8	...	...	...	95	221	201
VIII. Books, paper, printing and engraving, &c.	...	...	...	5	96	14	38	800	540
IX. Musical instruments, &c.	...	...	...	...	...	...	2	2	2
X. Arms and explosives	...	...	...	...	...	...	...	...	...
XI. Vehicles and fittings, saddlery and harness, &c.	3	36	17	4	15	14	144	689	547
XII. Ship and boat building, &c.	3	29	24	1	4	2	1	6	6
XIII. Furniture, bedding, &c.	...	...	...	2	32	19	29	372	347
XIV. Drugs, chemicals, and by-products	...	...	...	...	...	...	5	338	277
XV. Surgical and other scientific instruments	...	...	...	...	...	...	2	3	3
XVI. Jewellery and plated-ware, &c.	...	...	...	...	...	...	5	37	33
XVII. Heat, light, and power	9	3,151	1,211	7	483	393	52	6,709	5,462
XVIII. Leatherware, n.e.i.	...	...	...	...	...	...	...	...	...
XIX. Minor wares, n.e.i.	3	32	16	2	30	16	12	113	94
Total	147	69,903	35,854	57	1,389	967	873	46,800	35,889
Rest of State.									
I. Treating raw materials, product of pastoral pursuits	41	554	425	5	96	56	23	215	180
II. Oils and fats—animal, vegetable, &c.	6	46	27	...	...	...	...	...	...
III. Processes in stone, clay, glass, &c.	36	15,555	11,530	3	72	70	78	36,479	23,055
IV. Working in wood	62	7,284	5,819	36	480	384	224	3,625	3,027
V. Metal works, machinery, &c.	6	21,863	16,707	11	143	97	70	14,475	8,181
VI. Connected with food and drink, &c.	83	6,840	4,786	139	3,355	2,575	620	10,126	7,511
VII. Clothing and textile fabrics, &c.	4	664	651	3	52	45	131	2,289	2,144
VIII. Books, paper, printing, engraving, &c.	...	...	...	23	141	50	157	1,105	896
IX. Musical instruments, &c.	1	150	115	...	...	...	1	1	1
X. Arms and explosives	...	...	...	...	...	...	...	...	...
XI. Vehicles and fittings, saddlery and harness, &c.	8	41	28	73	565	374	558	2,675	2,019
XII. Ship and boat building, &c.	...	...	...	...	...	...	...	...	...
XIII. Furniture, bedding, &c.	...	...	...	1	7	...	28	216	151
XIV. Drugs, chemicals, and by-products	...	...	...	...	...	...	2	384	247
XV. Surgical and other scientific instruments	...	...	...	...	...	...	3	3	3
XVI. Jewellery and plated-ware, &c.	...	...	...	...	...	...	...	...	...
XVII. Heat, light, and power	28	7,955	6,134	68	5,667	4,879	171	16,587	11,308
XVIII. Leatherware, n.e.i.	...	...	...	...	...	...	...	...	...
XIX. Minor wares, n.e.i.	5	188	134	3	31	17	21	170	140
Total	280	61,140	46,356	365	10,609	8,547	2,087	88,350	58,863

Appendix VIII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
STATE.									
I. Treating raw materials, product of pastoral pursuits	63	2,111	1,562	12	499	224	135	7,539	6,080
II. Oils and fats—animal, vegetable, &c.	16	1,330	595	1	8	8	12	2,090	1,618
III. Processes in stone, clay, glass, &c.	78	20,998	15,615	15	987	708	283	54,656	38,258
IV. Working in wood	179	16,035	12,183	63	1,121	944	711	20,766	16,410
V. Metal works, machinery, &c.	38	86,756	50,525	36	721	480	874	79,828	57,943
VI. Connected with food and drink, &c.	179	19,730	12,552	193	5,900	4,295	2,286	55,496	42,232
VII. Clothing and textile fabrics, &c.	32	1,766	1,531	15	460	314	1,653	18,048	15,820
VIII. Books, paper, printing, and engraving, &c. ...	4	171	171	42	441	216	600	20,474	14,726
IX. Musical instruments, &c.	2	450	365	...	...	...	27	1,350	1,187
X. Arms and explosives, &c.	...	...	...	...	...	...	2	49	32
XI. Vehicles and fittings, saddlery and harness, &c. ...	19	201	157	88	678	433	1,185	8,435	6,939
XII. Ship and boat building, &c.	6	327	77	4	39	32	28	718	601
XIII. Furniture, bedding, &c.	2	100	98	7	87	62	366	8,036	6,561
XIV. Drugs, chemicals, and by-products	12	193	170	...	...	...	123	7,432	5,171
XV. Surgical and other scientific instruments	...	...	...	...	...	...	44	205	178
XVI. Jewellery and plated-ware, &c.	1	2	2	2	29	...	90	780	662
XVII. Heat, light, and power	49	55,019	31,051	97	8,179	6,733	383	36,603	26,964
XVIII. Leatherware, n.e.i.	1	5	...	...	...	...	45	900	833
XIX. Minor wares, n.o.i.	27	1,171	857	10	123	82	225	9,271	6,051
Total	708	206,365	127,511	585	19,272	14,531	9,072*	332,676	248,266

* In many factories more than one kind of power is used. The figures, therefore, are in excess of the actual number of factories using power.

Appendix IX.

Horse-power of Machinery used and Method of Production—1925–1929.

Year.	Steam.		Gas.		Electricity and other.		Total.	
	No. of Factories.	Horse power.	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	*No. of Factories.	Horse-power
METROPOLITAN DISTRICT.								
1925	349	88,435	288	6,013	5,222	99,719	5,859	194,167
1926	369	100,314	250	5,836	5,403	113,152	6,022	219,302
1927	339	96,942	197	5,530	5,694	132,194	6,230	234,666
1928	289	100,166	177	4,518	5,677	135,780	6,143	240,464
1929	281	75,322	163	7,274	†6,112	197,526	6,556	281,122
NEWCASTLE DISTRICT.								
1925	235	41,081	97	1,695	544	13,106	876	55,882
1926	209	43,936	130	1,641	461	16,720	800	62,297
1927	170	41,214	76	1,373	685	17,949	931	60,536
1928	151	40,780	73	1,753	730	36,920	954	79,453
1929	147	69,903	57	1,389	†873	46,800	1,077	118,092
REST OF STATE.								
1925	722	41,664	516	9,945	1,459	24,571	2,697	76,180
1926	711	37,673	513	10,938	1,655	29,409	2,879	78,020
1927	575	45,333	416	9,367	1,695	33,543	2,686	88,243
1928	483	36,721	396	9,961	1,885	48,610	2,764	95,292
1929	280	61,140	365	10,609	†2,087	88,350	2,732	160,099
STATE.								
1925	1,306	171,180	901	17,653	7,225	137,396	9,432	326,229
1926	1,289	181,923	893	18,415	7,519	159,281	9,701	359,619
1927	1,084	183,489	689	16,270	8,074	183,686	9,847	383,445
1928	923	177,667	646	16,232	8,292	221,310	9,861	415,209
1929	708	206,365	585	19,272	†9,072	332,676	10,365	558,313

* In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actual number of factories using power.

† Including 47 factories using oil of 1,357 horse-power (Metropolitan District).
91 ,, 1,845 ,, (Newcastle District).
312 ,, 8,805 ,, (Rest of State).
,, 450 ,, 12,007 (State).

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Appendix X.—Accidents by Machinery, 1926–29.

Machines.	1926.	1927.	1928.	1929.
Metal Working Machines—				
Drills	13	19	36	46
Emery wheels	36	25	53	98
Guillotines	6	9	6	13
Lathes	20	31	34	67
Milling	4	6	5	13
Polishing	2	16	16	27
Power presses	39	21	36	40
Riveting	4	1	2	4
Rolling	5	6	5	6
Screwing	2	1	2	1
Shaping	1	4	3	5
Shears	6	7	8	13
Slotting	1	1	1	...
Steam hammers	...	3	5	4
Wire-working	74	67	63	43
Other tinsmiths' machines	2	10	5	4
Other ironworking machines	34	32	57	76
	250	259	337	460
Woodworking Machines—				
Band saws	11	8	13	18
Boring	2	1	1	10
Circular moulders	13	18	17	38
Circular saws	65	48	70	101
Jointers	14	22	20	53
Lathes	2	5	5	8
Planers	22	15	15	17
Other woodworking machines	26	30	36	47
	155	147	177	292
Printing Machines—				
Cardboard box machines	17	1	12	...
Envelope machines	3	2	1	1
Guillotines	3	...	4	5
Platens	11	12	9	11
Printing machines	14	9	11	26
Wire-stitching machines	13	16	10	16
Other printing machines	30	57	58	64
	91	97	105	123
Food and Drink Machines—				
Biscuit machines	4	2	10	6
Confectionery machines	3	8	6	7
Dough brakes	6	...	9	5
Mincing	9	8	6	9
Mixing	..	4	...	2
Tobacco	7	11	13	9
Other food and drink machines	13	33	40	59
	42	66	84	97

Machines.	1926.	1927.	1928.	1929.
Stone, clay, &c., Machines—				
Brick presses	2	1	1	10
Pans	1	...	...	..
Tile presses	1	2	2	2
Other stone, &c., machines	8	4	21	20
	12	7	24	32
Leather Working Machines—				
Power presses	4	2	2	...
Rolling	4	...	1	1
Other leather machines	12	9	14	14
	20	11	17	15
Clothing Machines—				
Boot machines	12	22	9	27
Fur-cutting	...	...	2	...
Sewing	6	8	4	26
Wool machines	17	27	30	25
Other clothing machines	10	8	23	33
	45	65	68	111
Laundry Machines—				
Calenders	10	3	...	2
Hydro-extractors	1	...	...	...
Ironing	6	3	2	4
Other Laundry machines	...	4	3	5
	17	10	5	11
Rubber Working Machines—				
Rolling	1	...	2	1
Other rubber machines	12	19	41	58
	13	19	43	59
Paintmaking machines	1	1	1	1
Soapmaking machines	4	2	7	2
Miscellaneous Machines—				
Elevators and cranes	36	13	11	23
Engines	4	...	...	...
Fan	...	...	...	1
Mill gearing	46	43	43	62
Other machines	34	25	8	27
	125	84	70	116
Total	770	765	930	1,316

Appendix XI.—Prosecutions by Districts, 1925–29.

Year.	Information Laid.	Convictions.	Dismissals.	Withdrawals.
		Metropolitan.		
1925	79	75	3	1
1926	79	72	4	3
1927	57	56	....	1
1928	163	73	1	89
1929	196	155	2	39*
		Newcastle		
1925	7	7	. .....	..... .
1926	5	5	....	.. ..
1927	. ....	.....	....	. . ..
1928	12	2	.....	10
1929	55	33	.....	22
		Rest of State.		
1925	6	6	.....	.....
1926	6	6	... .	.....
1927	2	1	1	.....
1928	2	.....	....	2
1929	280	159	1	120†
		The State.		
1925	92	88	3	1
1926	90	83	4	3
1927	59	57	1	1
1928	215	113	1	101
1929	531	347	3	181

* Including 6 summonses not served. † Including 7 summonses not served.

Sydney: Alfred James Kent, I.S.O., Government Printer—1930.

1930-31.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

DEPARTMENT OF LABOUR AND INDUSTRY

REPORT

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ON THE WORKING OF THE

FACTORIES AND SHOPS ACT, 1912,

DURING THE YEAR 1930.

Ordered by the Legislative Assembly to be printed, 29 *September*, 1931.

SYDNEY: ALFRED JAMES KENT, I.S.O., GOVERNMENT PRINTER.

1931.

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THE THIRTY-FOURTH SERIES OF ANNUAL REPORTS FURNISHED TO THE MINISTER FOR LABOUR AND INDUSTRY IN TERMS OF SECTION 19 OF THE FACTORIES AND SHOPS ACT, 1912.

The Under-Secretary, Department of Labour and Industry, to The Honorable the Minister for Labour and Industry.

Department of Labour and Industry,
Sydney, 25th August, 1931.

Dear Sir,

I forward for submission to Parliament, in terms of section 19 of the Factories and Shops Act, 1912, Annual Reports on the operations of that Act for the year ended the 31st December, 1930.

Yours faithfully,

F. W. KITCHING,
Under-Secretary

OFFICE OF THE CHIEF INSPECTOR OF FACTORIES AND INVESTIGATION OFFICER.*

Operations.

Report in terms of Section 19 of the Factories and Shops Act, 1912.

Arrangement of Inspectorial Districts.

The provisions of the Factories and Shops Act were extended to cover the whole of the State, as from the 1st July, 1915. The area outside of the Metropolitan District is divided up into Country Districts, and the following statement will show the arrangement of these districts at the close of 1929 :—

District.	Head Centre.	Staff.
Newcastle	Newcastle	Superintending Inspector Clark.
		Inspector Weir.
		,, Young.
North Coast	Sydney	,, Hastie.
North-Western	Sydney	,, Armstrong.
South Coast	Woonona	,, Waugh.
Southern	Sydney	,, Wallace.
South-Western	Sydney	,, McEvoy.
Western	Orange	,, Baker.
Broken Hill	Broken Hill	,, Butler.
Central Western	Sydney	,, Hutchinson.

The Country District Officers, in addition to the work of factory inspection and investigations under the Industrial Arbitration Act, are required to carry out work under the Early Closing Acts as well as that pertaining to the departmental policy of Country Labour Exchanges.

Inquiries emanating from the Migration Section of the Department also devolved upon the Inspectors in both the metropolis and the country.

The following appointments, &c., and alterations in the control of districts occurred during the year :—

Inspector Durack to the Broken Hill District in January, 1930. Inspector Butler to the North-western District, operating from Head Office.

Inspector T. G. Bennet, appointed as Superintending Inspector of Factories and Shops. Inspectors Misses Scobie and Brown appointed as Senior Inspectors of Factories and Shops.

Inspector Wallace died on the 22nd July, 1930.

Statistics.

Cards of instruction served on the occupiers of factories within the Metropolitan District numbered 20,029 for 1930, as compared with 17,307 in 1929; in the Newcastle District, 1,835 in 1930, as against 2,312 in 1929; in the Broken Hill District, 21 in 1930, compared with 139 in 1929; in the rest of the State 6,377, as against 4,780 in the previous year.

Returns collected from factory occupiers for 1930 show that at the date of collecting the returns (end of November, 1930) 13,229 factories throughout the State employed 115,316 persons, compared with 12,310 factories employing 144,875 persons at the end of 1929, an increase of 919 factories and a decrease of

*Matters covered by the Boiler Inspection Regulations made under Section 62 of the Factories and Shops Act, 1912, are reported upon by the Departmental Engineer and Chief Inspector of Scaffolding and Lifts.

29,559 persons. Male employment decreased by 22,401, there being a decrease of 5,234 under 21 years of age, and a decrease of 17,167 over that age. Female employment decreased by 7,158, there being a decrease of 4,993 under 21 years of age, and a decrease of 2,165 over that age. Of the total persons employed, 80,946, or 70·2 per cent., were male, and 34,370, or 29·8 per cent., were female.

The following statement will show the increase or decrease in the number of factories and persons, males and females, employed therein, from the year 1915, when the whole State was brought under the provisions of the Act, to 1930, inclusive :—

Year.	Factories registered.	Increase over previous year.	Persons employed.		Total.	Increase over previous year.		Total	Percentage of total increase.	
			Males.	Females.		Males.	Females.		Males.	Females.
1915	7,425	1,432	70,517	28,706	99,223	7,181	1,901	9,082	79·1	20·9
1916	8,065	640	63,895	28,757	92,652	*6,622	51	*6,571	*100·8	·8
1917	8,099	34	66,066	29,185	95,251	2,171	428	2,599	83·6	16·4
1918	8,346	247	74,719	31,246	105,965	8,653	2,061	10,714	80·8	19·2
1919	9,003	657	84,474	32,431	116,905	9,755	1,185	10,940	89·2	10·8
1920	9,745	742	92,566	33,479	126,045	8,092	1,048	9,140	88·6	11·4
1921	10,087	342	88,819	33,565	122,384	*3,747	86	*3,661	*102·3	2·3
1922	10,674	587	86,935	36,142	123,077	*1,884	2,577	693	*271·9	371·9
1923	11,058	384	95,926	35,635	131,561	8,991	*507	8,484	*105·9	5·9
1924	11,559	501	98,302	36,414	134,716	2,376	779	3,155	75·3	24·7
1925	11,836	277	100,771	37,916	138,687	2,469	1,502	3,971	62·1	37·9
1926	11,829	*7	109,650	41,972	151,622	8,879	4,056	12,935	68·6	31·4
1927	11,413	*416	107,018	41,940	148,958	*2,632	*32	*2,664	*98·7	*1·3
1928	11,421	8	105,977	42,621	148,598	*1,041	681	*360	289·1	*189·1
1929	12,310	889	103,347	41,528	144,875	*2,630	*1,093	*3,723	*70·6	*29·4
1930	13,229	919	80,946	34,370	115,316	*22,401	*7,158	*29,559	*75·7	*24·3

*Decrease.

Detailed figures as to the number and classes of factories, number and sex of employees, and horse-power of machinery used in the various districts of the State, will be found in the Appendices I to XI.

At the end of November, 1930, there were 7,991 registered factories in the Metropolitan District, employing 91,972 persons, an increase of 658 factories, and a decrease of 25,251 persons, compared with the figures at the end of the previous year. Of this decrease, males represented a decrease of 18,567, or 73·5 per cent., and females a decrease of 6,684, or 26·5 per cent., 14,162, or 56 per cent., and 1,998, or 7·1 per cent., being a decrease of males and females over the age of 21 years. Of the total persons employed, males represented 59,394, and females 32,578, or 64·5 and 35·5 per cent. respectively. Only 5,085, or 5·5 per cent., were under 16 years of age; 11,591, or 12·6 per cent., were between 16 and 18 years; 15,025, or 16·3 per cent., were between 18 and 21 years; and the remainder, 60,271, or 65·6 per cent., were over 21 years of age.

Of the total males employed, 1,815, or 3·0 per cent., were under 16 years of age; 5,522, or 9·3 per cent., between 16 and 18 years; 7,768, or 13·0 per cent., between the ages of 18 and 21 years; and the remainder, 44,289, or 74·7 per cent., were over 21 years of age.

Of the total females employed, 3,270, or 10·0 per cent., were under 16 years of age; 6,069, or 18·6 per cent., between 16 and 18 years; 7,257, or 22·2 per cent., between the ages of 18 and 21 years; and the remainder, 15,982, or 49·2 per cent., were over 21 years of age.

It is satisfactory to report that out of a total employment in the Metropolitan District of 91,972, only 5,085, or 5·5 per cent., were under 16 years of age. A comparison of the figures of each sex under and over 21 years of age is somewhat interesting, inasmuch as it demonstrates that, whereas the difference between the number of females of these ages is slight, the excess of males over 21 years of age is large. There were more females than males under 21 years of age employed in the factories in the Metropolitan District, but the males over 21 years of age exceeded the number of females over that age in the proportion of almost 3 to 1.

During the period of 1912 to 1914 the percentages of boys and girls under 16 years of age remained about the same; for the period 1914 to 1929 the percentage slightly increased, except for the year 1928, when there was a slight decrease, whilst the percentage for 1930 again decreased, as the following table will show :—

Percentage distribution of persons under 16 years of age.

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1912	2·3	2·9	5·2	1922	2·6	3·8	6·4
1913	2·2	2·8	5·1	1923	2·7	3·8	6·5
1914	2·3	2·9	5·2	1924	2·8	3·7	6·5
1915	2·8	3·1	5·9	1925	2·7	3·8	6·5
1916	2·6	3·3	5·9	1926	3·0	3·9	6·9
1917	2·5	3·4	5·9	1927	2·9	4·1	7·0
1918	2·4	3·3	5·7	1928	2·7	3·6	6·3
1919	2·6	3·4	6·0	1929	2·7	4·4	7·1
1920	2·5	3·4	5·9	1930	2·0	3·5	5·5
1921	2·6	3·6	6·2				

Taking the males and females under 16 years of age collectively, there was a slight decrease during 1913 over the previous year, but from 1914 to 1927 the percentage gradually increased, equalling in 1915, 1916, and 1917 that for 1920, as the table indicates. The percentage for 1918 was slightly below that for the three previous years, being 5·7 as against 5·9, but for 1923, 1924, and 1925 it was higher than for any year since 1909, when it was 6·8. The percentage for 1927 was 7·0, whilst for the year 1928 there was a slight decrease over the previous year. The percentage for 1929 showed a further increase, whilst the percentage for 1930 is the lowest since 1915.

The industry class employing the greatest number of persons in 1930 was clothing and textile fabrics with 26,270, followed by metal works, machinery, &c., with 13,539, and food and drink, &c., with 14,885; these three classes accounting for 54,694 out of a total of 91,972 employed in all classes of factories in the Metropolitan District.

Treating raw materials increased by 282; and oil and fat products by 86, as compared with 1929. The noticeable decreases in employment were in clothing, 6,139; metal works, 5,809; woodworking, 2,322; stone, clay and glass, 3,437; furniture, 1,936; vehicles and harness, 1,891; printing, 1,203; food and drink, 1,113.

The following statement will show the increase or decrease in persons, males and females, from 1915 to 1930 inclusive :—

Year.	Persons employed.			Increase over previous year.			Percentage of tota increase.	
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Female.
1915	54,891	26,438	81,329	.....	.....	.....	.....	.....
1916	47,378	26,649	74,027	*7,513	211	*7,302	*102·9	2·9
1917	48,927	27,223	76,150	1,549	574	2,123	72·9	27·1
1918	55,355	29,145	84,500	6,428	1,922	8,350	77·0	23·0
1919	62,030	30,309	92,339	6,675	1,164	7,839	85·2	14·8
1920	68,583	31,270	99,853	6,553	961	7,514	87·2	12·8
1921	63,850	31,309	95,159	*4,733	39	*4,694	*100·8	·8
1922	66,888	33,802	100,690	3,038	2,493	5,531	55·0	45·0
1923	70,022	33,334	103,356	3,134	*468	2,666	117·5	*17·5
1924	71,642	34,131	105,773	1,620	797	2,417	67·0	33·0
1925	74,096	35,728	109,824	2,454	1,597	4,051	60·5	39·5
1926	82,518	39,465	121,893	8,422	3,737	12,159	69·3	30·7
1927	80,396	39,535	119,931	*2,122	70	*2,052	*103·4	3·4
1928	80,241	40,401	120,642	*155	866	711	*21·8	121·8
1929	77,961	39,262	117,223	*2,280	*1,139	*3,419	*66·7	*33·3
1930	59,394	32,578	91,972	*18,567	*6,684	25,251	*73·5	*26·5

* Decrease.

The following table shows the increase or decrease in number of factories and persons employed therein during the same period :—

Year.	Number of factories.	Increase over previous year.	Persons employed.	Increase over previous year.
1915	4,758	.....	81,329	.....
1916	4,814	56	74,027	*7,302
1917	4,799	*15	76,150	2,123
1918	4,942	143	84,500	8,350
1919	5,330	388	92,339	7,839
1920	5,842	512	99,853	7,514
1921	5,934	92	95,159	*4,694
1922	6,367	433	100,690	5,531
1923	6,573	206	103,356	2,666
1924	6,868	295	105,773	2,417
1925	6,947	79	109,824	4,051
1926	6,837	*110	121,983	12,159
1927	6,877	40	119,931	*2,052
1928	6,876	*1	120,642	711
1929	7,333	457	117,223	*3,419
1930	7,991	658	91,972	*25,251

* Decrease.

Total increase—3,233 factories, 10,643 persons.

As at 30th November, 1930, 1,300 registered factories in the Newcastle District employed 9,081 persons, of whom 8,188, or 90·1 per cent., were males, and 893, or 9·9 per cent., were females. 55·6 per cent. of the females employed in the Newcastle District and 18 per cent. of the males were under 21 years of age. The large percentage of adult male employment was due to a great extent to the number employed at the steel and iron works of the Broken Hill Proprietary Company, Limited, at Port Waratah, Rylands Bros. (Aust.), Limited, Vickers' Commonwealth Steel Products, Limited, and Lysaghts', Limited; aggregating 3,802, or nearly 56·6 per cent. of the total number of males over 21 years of age.

In the remainder of the State, there were on 30th November, 1930, on the records of the Department, 3,938 registered factories, employing 14,263 persons; of whom 13,364, or 93·6 per cent., were males, and 899, or 6·4 per cent., females. This was an increase of 275 factories and a decrease of 2,141 persons, as compared with 1929.

Horse-power of Machinery.

At the end of the year 1930, 11,333 factories throughout the State were using machinery equal to 477,098 horse-power.

Child Labour in Factories.

One hundred and fifty-one children under 14 years of age (78 boys and 73 girls) were granted the special permission of the Minister to engage in factory employment. Four thousand nine hundred and thirty-one children were certified as physically fit for employment in certain classes of factories.

Following is a table showing the distribution of the foregoing permits and certificates in the district in which the State is divided for departmental purposes :—

District.	Permits granted.			Certificates of Fitness.	
	Special (to children between 13 and 14 years of age).			Issued.	Declined
	Males.	Females.	Total.		
Metropolitan	78	72	150	4,663	1
Newcastle	.....	.....	.....	156	.....
Broken Hill	.....	.....	.....	.....	.....
Rest of State	.....	1	1	112	.....
Total	78	73	151	4,931	1

By way of comparison, the numbers of special permits granted during the last ten years are shown hereunder :—

Year.	Males.	Females.	Total.	Year.	Males.	Females.	Total.
1921	125	44	169	1926	118	69	187
1922	116	61	177	1927	92	51	143
1923	152	74	226	1928	89	67	156
1924	160	58	218	1929	79	71	150
1925	173	64	237	1930	78	73	151

New Industries.

Modern factory premises were almost completed at the end of the year to house a plant designed for the manufacture of sheet glass, and this will be the first factory adapted for this purpose in Australia.

Sheet glass may be divided into three classes, viz., figured glass, window-glass and plate glass. At present the plant installed consists mainly of melting furnaces or tanks, window-glass drawing machines, figured glass rolling machines, mixing machines, grinding machines, annealing furnace, a refractory brick plant, gas producers and certain other smaller machines. The raw materials, with the exception of soda, are obtainable locally. Rolled glass has already been produced and it is expected that window and plate glass will be manufactured in the near future. When completed the factory will be capable of supplying the glass demand of the whole Commonwealth, which is estimated at twelve million square feet per annum in normal times.

The plant, like the building, the main portion of which is 202 feet long by 142 feet wide, is of modern type.

It is anticipated that employment will be provided later in this new industry for several hundred workmen.

Early in the year an aircraft factory was transferred from Victoria and a little later two smaller factories in the same industry commenced operations. A large number of employees were engaged in the work, which was being carried on with vigor at the end of the year. It is interesting to note that the aeroplane used in a recent record air flight to England was built at one of the three factories referred to.

The manufacture of leather and kid gloves was commenced, and in spite of many difficulties maintained production. The chief obstacle was the lack in supply of the proper material and this will necessitate the establishment of a tannery specially equipped for the purpose. It is expected that with this difficulty overcome and the installation of additional machinery the industry will prove successful and will employ many hands.

The Electrical Company referred to in last year's report is now manufacturing incandescent electric light lamps for house, shop and street lighting. It is anticipated that electric lamps for motor-cars will be also manufactured. Employment is now provided for about one hundred hands and it is hoped that this number will be largely increased before the end of the present year. The plant, which is largely automatic, and much of which is of an intricate and special nature, is housed in a modern building, 320 feet long by 80 feet wide. Construction is of steel frame encased in concrete and brick filling, and the floor space amounts to about 60,000 square feet. Lighting and ventilation are of modern character.

Pearl-shell, obtained exclusively from Thursday Island, is now being used in the manufacture of pearl-shell buttons, also cuff-links and fancy buttons, pearl buckles, slides and fancy goods. Coloured pearl-shell buttons are also to be manufactured in various shades. The proprietors expect to use about 6 tons of pearl-shell monthly when the works are fully established and with the installation of additional machinery, which is to be imported, it is expected that a large number of hands will be engaged in the industry.

The manufacture, in this State, of all grades of wood lead-pencils, and crayon pencils in blue, green and red colours, was in sight at the end of the year. Wood and graphite comprise the raw materials and the wood, which is imported from Florida and California, is of the cedar variety. Australian woods have not yet been proved satisfactory for the work. The graphite has also to be imported, the local graphites being found unsatisfactory owing to a low percentage of carbon. Specially imported machinery is now used throughout.

Peroxide is now manufactured locally. Previously this chemical was imported in bulk from Europe.

Overtime in Factories.

During 1930 the Minister granted applications for extensions of overtime in respect of 8 factories, affecting 93 female employees. Similar permission was granted during the previous year in respect of 50 factories, involving 26 male and 820 female employees, and the figures for 1928 were 31 factories and 7 males and 466 females.

The following table sets out the classes of factory in which the additional overtime was worked :—

Class of Factory.	Factories.	Employees.		Total.
		Male.	Female.	
Class II—				
Soap	1	.....	2	2
Class VI—				
Confectionery	1	.....	6	6
Class VII—				
Clothing	1	.....	9	9
Spinning	1	.....	12	12
Hosiery and Knitting	1	.....	24	24
	3	.....	45	45
Class VIII—				
Printing	2	.....	18	18
Class XVII—				
Radio Apparatus	1	.....	22	22
Total	8	.....	93	93

Fencing and Guarding of Machinery.

During the year the Departmental standard in fencing and guarding of factory machinery was well maintained, this result being due to the increased number of visits by the Inspectors. Occupiers were found ready to consult with the Inspectors as to the best methods of guarding machines and fencing mill gearing. Operatives were frequently brought into such consultations with satisfactory results. The ever present human factor plays a very important part in the accident field, but the constantly repeated efforts of the Inspectors are tending to reduce this serious obstacle.

As in previous years, the majority of mechanical accidents occurred at circular saws, spindle moulders, hand planers and power presses. In spite of the special attention given to these dangerous machines, it is difficult to satisfactorily reduce all accidents occurring thereat.

Change in the sizes of timbers to be dressed frequently result in accident at wood working machinery owing to the operatives neglecting to change the guard to suit the work to be done. Similarly, at power presses, different dies requiring different forms of guarding allow of repeated accidents unless the operative makes the necessary change.

Many instructions were given during the year with respect to the provision of riving knives at circular saws. This guard, recognised over the whole world, as being most effective, if properly fitted, is rigorously insisted upon as its absence has resulted in more than one fatality.

The question of accidents at overhead shafting has been receiving serious consideration as many occupiers of factories apparently are not aware of their statutory obligation in this regard, holding the view that the position of such shafting renders it reasonably safe, and further the fencing of it is impracticable.

Decisions by the English Courts have practically interpreted the meaning of section 33 of the local Act in its application to that part of mill gearing which is overhead shafting. The effect of these decisions briefly is that the requirements apply not only to machinery to which persons working in the factory normally have access, but also to machinery to which the access is only occasional or can be obtained only by the use of a ladder or by climbing upon a machine bench, &c.

The majority of accidents at shafting are often fatal and nearly always serious through the workers approaching unfenced shafting whether overhead or otherwise whilst it is in motion for the purpose of shipping or unshipping belts, or for oiling, carrying out repairs, or for limewashing.

It has now, in the light of the English decisions, to be regarded as settled law that the occupier of a factory is under an obligation to fence all shafting which it is possible for any person to approach for any purpose unless he takes adequate steps to prevent any person being endangered by it, or in other words, overhead shafting should be fenced, or as an alternative, should either be stopped or slowed down to a speed which might reasonably be considered safe, say, not exceeding six revolutions per minute.

In a few of the larger factories "Safety First" committees have been established with satisfactory results.

Accidents in Factories.

Following is an analysis of the reported accidents, and the extent of injuries:—

Extent of Injury.	Accidents Reported.				
	District.				Total.
	Metropolitan	Newcastle.	Broken Hill.	Rest of State.	
Fatal	3	2	...	1	6
Permanent Injury—					
Loss of arms	1	2	...	...	3
,, hands	...	...	...	...	...
,, fingers or parts	78	5	2	4	89
,, eye	2	...	...	...	2
,, legs	3	1	...	...	4
Temporary Injury—	84	8	2	4	98
Gas poisoning	1	1	...	2	4
Burns, scalds, &c.	3 1	49	...	56	476
Cuts, lacerations, bruises—					
On hands	1,972	226	2	164	2,364
,, arms	344	51	1	36	432
,, body	713	104	3	90	910
,, feet	490	104	...	83	677
,, head	3 2	55	1	37	395
Other	53	3	...	3	59
	4,246	593	7	471	5,317
Total	4,333	603	9	476	5,421

The following statement gives the distribution of accidents as due to machinery or other causes Appendix X contains details of machinery at which accidents happened.

Causes of Accident.

Machinery—

Metal working	372	Paper, printing	100
Woodworking	241	Leather	16
Stone, clay, &c.	13	Rubber	35
Food and drink	84	Laundry	7
Clothing, &c.	100	Other	44

Miscellaneous—

Mill gearing	53
Elevators, conveyors, &c.	36
*Accidents under Section 38*d*	3,867

Other Causes.

Dangerous substances—		Electricity	14
Steam	20	Chemicals	5
Hot substances—		Gas	6
Water	32	Other	9
Metal	158		
Other	209	Total	5,421

* These accidents occurred through causes not specified above, but so disabling the injured person as to prevent him from returning to his work in the factory within seven days.

Fatal Accidents.

During the year six persons lost their lives as the result of accidents in factories. Of these one was occasioned by mechanical means, and five by non-mechanical means. The accidents are briefly described hereunder:—

In a sawmilling plant in the country a governor belt slipped off and as the result of the increased speed of the engine the driving belt broke at its lacing and struck an employee inflicting fatal injuries.

In a brick works an employee who was standing some height from the ground was assisting to put a belt on a pulley. He had tied the belt to the pulley with a piece of old rope. When the belt was shipped the employee pulled at the rope which broke, and he fell striking his head with such force that he died a little later in the day.

At a large gas works an employee was poisoned by inhalation of sulphuretted hydrogen gas. The deceased, with two other men, was engaged in placing the lid on a saturator when he was overcome by escaping gas. Since this accident safeguards have been provided at the plants to prevent any recurrence.

At a sugar works an employee was removing bags of sugar from the top of a stack, approximately 30 feet high, when he was struck by the sling and falling to the floor received such severe injuries that he died in hospital shortly after admission.

At a country sawmill an employee was placing a rolling sling around three sawn flitches when the outside flitch rolled and crushed his skull against the carriage of a breaking down saw.

At a large fertilising works an employee whilst engaged fixing tarpaulins on some loaded trucks was crushed between the truck couplings as the result of a movement of the trucks, succumbing five days later to his injuries.

Means of Escape in Case of Fire.

Regular inspections of all means of escape from factories were made during the year, and in very few instances were instructions necessary with respect to same. Direction boards indicating fire escape exits are now very common, and it can be said that occupiers are satisfactorily observing their obligations in relation to means of escape in case of fire.

Many new escapes were provided during the year to the satisfaction of the Chief Officer of Fire Brigades and this Department.

Architects continued their efforts to avoid external stairways as much as possible, preference being largely in favour of internal, balcony and roof escapes.

Three especially difficult problems arose at three separate factory buildings, and were engaging the interest and attention of the Department when the year closed.

The Inspectors paid many visits to factory premises in company with representatives of the Chief Officer of Fire Brigades, who certified that during the period under review, 81 factory premises had been provided with sufficient means of escape.

Prosecutions.

During the year informations for breaches of the Factories and Shops Act and Regulations were laid in 402 cases.

Following are the details :—

		Convictions.	Dismissals.	Withdrawals.	Total.
Section					
6 (15)	Failing to pay registration fee	94	5	251*	350
7	Being in occupation of unregistered factory	16	.....	23*	39
33	Failing to fence dangerous machinery	7	2	.....	9
38a	Failing to provide first-aid ambulance chest	1	.....	.....	1
45	Employing children under 16 without certificates	1	.....	1	2
49	Working or permitting work in furniture factories after hours	1	.....	.....	1
	Total	120	7	275	402

* Summonses were not served in twenty-nine instances, namely :—Twenty-eight under Sec. 6 (15), and one under Sec. 7. Order was made by Magistrate in one case under Sec. 6 (15).

WALTER I. TAYLOR,

Chief Inspector of Factories and Investigation Officer.

FACTORIES AND SHOPS ACT, 1912.

SECTION 62.

Boiler Regulations.

Annual Report.—Period January–December, 1930.

The Departmental Engineer reports as follows:—

Accredited Inspectors.

Applications Made and Certificates Granted.—During the year twenty-two (22) made application for the Minister's Certificate of Approval to inspect boilers and other pressure vessels installed in factories, eighteen (18) being granted and certificates issued. At the end of the period under review, and after list revision, there were 177 active accredited inspectors, as per list attached.

Boiler Inspection.

Reports in connection with the inspection of boilers and other pressure vessels numbering 9,952 were lodged by accredited inspectors as follows:—

	Reports received.		
	Boilers.	Other Pressure Vessels.	Total.
Prescribed Reports:—			
First Inspections	410	1,194	1,604
Re-inspections	3,029	4,618	7,647
Total	3,439	5,812	9,251
Non-prescribed Reports:—			
Internal	701	.....	701
Grand Total	4,140	5,812	9,952

The number of various types of boilers and other pressure vessels inspected, discarded, and newly installed is given in the following table:—

	First Inspection.	Re-Inspection.	Total.	Discarded.	Newly Installed.	Explosions.
Boilers—						
Cast-iron Sectional	7	72	79	3	7	...
Colonial	92	829	921	76	92	1
Cornish	5	102	107	8	5	...
Egg-ended	...	4	4	1	...	...
Jackass	1	22	23	5	1	...
Lancashire	3	87	90	1	3	...
Locomotive, including Portable Traction, and Road Rollers.	66	417	483	60	66	...
Marine Wetback	...	...	...	...	...	...
Marine Dryback	4	41	45	8	4	1
Multitubular	10	200	210	17	10	...
Vertical	173	730	903	109	173	...
Watertubes	29	454	483	24	29	...
Wolff	...	...	...	...	...	...
Other Steam Generators	20	71	91	6	20	...
Total	410	3,029	3,439	318	410	2

Types of Boilers and other Pressure Vessels Inspected, &c.—*continued.*

	First Inspection.	Re-Inspection.	Total.	Discarded.	Newly Installed.	Explosions.
Other Pressure Vessels—						
Air and Water Receivers	565	1,293	1,858	106	565	...
Autoclave Presses	1	30	31	1	1	...
Calenders, including Mangles	14	162	176	4	14	...
CO_2 Cylinders and Purifiers	12	149	161	5	12	...
Coolers	...	...	...	...	...	...
Copper Coils and Pipe Heaters	22	109	131	5	22	...
Cylinders, Drying Drums and Boilers (Steam Heated).	33	423	456	7	33	...
Desiccators	...	4	4	1	...	...
Digestors	7	85	92	5	7	...
Economisers	...	10	10	...	...	...
Hot Tables—Presses, Drying Tables, Cantilever Presses, Patching Tables.	49	299	348	15	49	...
Jackoted Vessels	85	970	1,055	64	85	...
Monteju and Crystallizers	2	26	28	...	2	...
Oil Receivers	...	1	1	...	...	...
Retorts	10	73	83	3	10	...
Steam-heated Rolls	1	3	4	...	1	...
Steam-heated Vessels	18	250	268	14	18	...
Steam Separators	1	7	8	...	1	...
Sterilizers	2	31	33	2	2	...
Stills	4	22	26	...	4	...
Stout and Wine Butts	...	...	...	...	...	...
Sugar Driers	...	...	...	...	...	...
Superheaters	...	2	2	...	...	...
Vacuum Vessels	2	18	20	...	2	...
Vegetable Steamers	...	...	...	...	...	...
Vulcanizers	366	651	1,017	70	366	...
Total	1,194	4,618	5,812	302	1,194	...
Grand Total	1,604	7,647	9,251	620	1,604	2

Notices Served upon Factory Occupiers.

Notices numbering 333 were served upon factory occupiers to ensure compliance with the requirements of the Boiler Regulations, as per the following summary :—

	Boilers.	Other Pressure Vessels.	Total.
Blow-off Cocks	3	.....	3
Casing in Lever Safety Valves	2	5	7
Cocks between Check-valves and Boiler	9	1	10
Direct spring Loaded Safety Valves	24	40	64
Feed Pumps	1	.....	1
Fusible Plugs	20	.....	20
Injectors	1	.....	1
Isolating Valves—Steam Line	1	.....	1
Pressure Gauges	25	18	43
Reducing Valves	2	4	6
Safety Valves to be Locked	6	22	28
Test Cocks	10	.....	10
Valves on Steam Connections	.....	1	1
Water Gauges	15	.....	15
Water Gauge-glass Protectors	14	5	19
Unclassified	78	26	104
Total	211	122	333

Boiler Accidents.

Boiler accidents were reported and investigated as follows :—

1. A fireman, in attempting to blow some water out of a Colonial boiler carrying a pressure of 90 lb. per square inch, opened the blow-down cock too far, and was enveloped by the water and steam discharged. He was severely scalded on face and body.

2. An oil-fired B. and W. boiler installed in a factory backfired. Investigation showed that the burner had been turned so low that it subsequently went out. When relit, the accumulation of gases caused an explosion which dislodged some of the brickwork and slightly burned two men. The boiler was fitted with a damper which has since been cut away, and, in addition, two extra explosion doors have been installed on each side of the brickwork.

Factories and Shops Act, 1912—*Regulations for the Inspection of Steam Boilers, &c.*

ACCREDITED INSPECTORS.—31ST DECEMBER, 1930.

In accordance with the provisions of clause 5 of the Regulations of the 10th March, 1916, made under section 62 of the Factories and Shops Act (published in *Industrial Gazette*, vol. 9, p. 815), the Minister has approved that the persons whose names appear hereunder may make inspections and carry out all other necessary duties pertaining to the application of such Regulations.

The names appear in groups, comprising persons resident in Sydney and Suburbs, Newcastle and district, and country centres, respectively.

Sydney and Suburbs.

Cert. No.	Name.	Address.
75	Allen, J. A.	c/o Dickson, Cridland and Allen, Mandible-street, Alexandria.
182	Allum, S. C.	42 Bridge-street, Sydney.
131	Archer, C. S.	Chaleyer-street, Rose Bay.
4	Banyard, T. R.	c/o British Engineering Pty. Ltd., 19–21 O'Connell-street, Sydney.
204	Barron, W. N.	"Narani," President-avenue, Brighton-le-Sands.
217	Bell, A. C.	28 Shaftesbury-road, Burwood.
172	Bennett, G. T.	72 King-street, Sydney.
17	Bernard, T.	17 Lenore-street, Five Dock.
221	Booth, H. C.	5 Dudley-street, Haberfield.
259	Boulton, R. A.	416 New Canterbury road, Dulwich Hill.
119	Brazenall, E.	14 Dryden-street, Campsie.
166	Brighton, E. J. B.	77 Glenmore-road, Paddington.
272	Burton, W. F.	41 McArthur-street, Guildford.
233	Butler, N.	Pittwater-road, Gladesville.
213	Campbell, A.	Russell-avenue, Lindfield.
105	Campbell, A. N.	c/o Tooth & Co. Ltd., George-street West, Sydney.
62	Chapman, G.	26 Clara-street, Erskineville.
109	Christie, J.	14 Remmington-street, Artarmon.
161	Coleman, J. H.	32 Paisley-road, Croydon.
293	Connie, A.	275 Henderson-road, Alexandria.
21	Connie, P.	275 Henderson-road, Alexandria.
189	Connie, W. F.	275 Henderson-road, Alexandria.
236	Crouch, E. E.	20 Napier-street, North Strathfield.
267	Cuthbert, P. O.	No. 4 Moana Flats, Upper Bay View street, McMahon's Point.
212	Davies, A. J.	11 Foucart-street, Rozelle.
28	Davis, C. E.	50 The Avenue, Granville.
180	Davis, H. C.	33 Strathallen-avenue, Northbridge.
230	Dempster, G.	24A Forsyth-street, Willoughby.
153	Denovan, C.	89 Lyons-road, Drummoyne.
199	Dobson, A. J.	12 Tenilbra-road, Northbridge.
218	Donaldson, D. A.	20 West-street, Five Dock.
240	Donaldson, W. J.	6 Slade-street, Crows' Nest.
211	Donnelley, N. S.	54 Therry-street, Drummoyne.
291	Douglas, W. A. R.	6 Bridge-street, Sydney.
92	Duncan, J.	7 Lord-street, Kogarah.
53	Elder, Wm.	17 Bond-street, Sydney.
281	Ellis, C. G.	47 Barker-avenue, North Lidcombe.
186	Fairclough, C. S.	63 Booth-street, Balmain.
19	Fielder, J.	c/o N.R.M.A., 26 Grosvenor-street, Sydney.
206	Fogarty, J.	98 Ben Boyd road, Neutral Bay.
226	Fowler, C. E.	"Palmiston," Carnarvon-street, Auburn North.
283	Fowler, S. C.	24 Oxford-street, Homebush.
49	Fox, F. C.	351 Kent-street, Sydney.
50	Fraser, H.	"Inverness," 7 Alviston-street, Strathfield.
222	Frye, F. T.	52 Pitt-street, Sydney.
219	Garrow, P. M.	"Rosslyn," Alice-street, Lakemba.
200	Gray, T. G.	30 Grosvenor-street, Sydney.
2	Gregory, R.	Walton-crescent, Abbotsford.
124	Hall, S. G.	25 Moore-street, Lilyfield.
31	Hastie, J.	16 Joseph-street, Ashfield.
52	Hopkins, E. J.	760 Botany-road, Alexandria.
264	Hoskin, C.	"La Tosca," Belmore-ave., Belmore.
134	Hosking, W. J.	67 Day-street, Sydney.
266	Hughes, J. J.	49 Holt-avenue, Cremorne.
29	Hunter, A. H.	Woolwich-road, Hunter's Hill.
284	Hutchison, G. A.	75 Macpherson-street, Mosman.
227	Keogh, P. J.	53 Green's-road, Paddington.
20/269	King, P. R.	144 Victoria-road, Marrickville.
228	Kirkcaldie, W. K.	c/o Shell Co. (Aust.) Ltd., 49 Clarence-street, Sydney.
154	Lawson, D.	30 Thompson-street, Mosman.
1	Lawson, J.	Queensland Insurance Co., Pitt-street, Sydney.
187	Lewis, A.	178 Oxford-street, Paddington.
129	Lewis, D. M.	Kingsland-road, Regent's Park.
288	Long, J. W.	28 Surrey-street, Darlinghurst.
232	Lyall, F.	c/o Lyall and Johnstone, Engineers, Redfern and Castlereagh streets, Redfern
250	McCadams, R. W.	Tressider-avenue, Haberfield.
39	McDonald, T. W.	"Durham," Rosebery-street, Mosman.
246	McGuinness, P. J.	471 Military-road, Mosman.
242	McLachlan, A.	"Brookside, Riverview-pde., Manly.
289	McLaren, P.	51 Cheviot-street, Ashbury.
94	McRoberts, H. A.	12 Grosvenor-road, Lindfield.
51	McSwiney, J.	c/o Union Assurance Society Ltd., 14 O'Connell-street, Sydney.
191	Martin, A. E.	"Bretley," 98 Woodburn-road, Lidcombe.
22	Mason, H. D.	25A Pitt-street, Sydney.
282	Miller, J.	48 Patterson-street, Concord.
10	Mitchell, S. M.	c/o Mercantile Mutual Insurance Co., 117 Pitt-street, Sydney.
277	Moore, W. E.	6 Lorraine-avenue, Arncliffe.
77	Morrison, A.	Pearson-street, Balmain.
132	Nairn, A. C.	"Shanklin," 38 Knox-street, Clovelly.
174	Nicholls, W.	c/o R. Wildridge & Co., 76 Pitt-street, Sydney.
12	Nicoll, G.	24 The Crescent, Homebush.
68	Oliver, R. K.	43 Maitland-ave., South Kensington.
115	Orchard, A. E.	"Harbour View," 2 Lookes-avenue, Balmain East.
255	O'Sullivan, J. D.	4 Kihilla-road, Auburn.
225	Pain, E. O.	129 Livingstone-road, Marrickville.
188	Pearson, E. W.	Hills-road, Birrong, via Regent's Pk.
292	Penfold, J.	118 Glebe-road, Glebe.
268	Porteous, A. C. F.	36 Osborne-road, Manly.
257	Portwine, A.	23 Boulevarde, Enfield.
67	Rawson, C.	32 Jamieson-street, Sydney.
6	Reid, C.	11 St. George's Crescent, Drummoyne.
234	Reid, J.	15 Shackel-avenue, Concord.
162	Reynolds, L. J.	82 Pitt-street, Sydney.
229	Richards, R. D.	780 Military-road, Mosman.
280	Roberts, O.	43 Muttama-road, Artarmon.
42	Rodgers, S. D.	"Dalmeny," 17 York-rd., Centennial Park.
255A	Rossell, A. H.	20 Evelyn-avenue, Concord.
175	Russell, R.	The Avenue, Granville.
45	Savage, J.	36 Tweedmouth-avenue, Rosebery.
249	Sealy, W. B.	69 Ashley-street, Chatswood.
273	Scott, E. J.	66 Raglan-street, Manly.
253	Scott, R. W.	10 Alice-street, Auburn.
263	Siddoway, A. H.	32 Stan-street, Willoughby.
285	Skidmore, A. J.	174 Hampden-road, Artarmon.
265	Small, O. E.	"Natalie," Massey-street, Gladesville.
209	Smeal, K. H.	8 Hazelbank-road, Wollstonecraft.
220	Smiles, W.	7 Iredale-avenue, Cremorne.
171	Smith, H. D.	"Malua," Fisher's-avenue, Vaucluse.
208A	Smith, W. H.	"Carinya," Burns-cres., Chiswick.
111	Stephenson, W. F.	2 Hunter-street, Sydney.
241.		
194	Stevens, E. R.	300 Stanmore-road, Petersham.
128	Stevenson, G.	Point-road, Northwood.
275	Stevenson, R. E.	"Kersley Moor," Chertsey-avenue, Bankstown.
58	Stobo, S. E.	Morce-street, Gordon.
88	Stowe, F. E.	54 Young-street, Sydney.
15	Tate, A. S. W.	Kelsyn Flats, Beetha-road, Neutral Bay.
210	Taylor, C.	65 Wharf-road, Gladesville.
239	Teape, G. J. P.	"Ellerslie," 54 Hay-street, Croydon.
66	Thomson, J. Sted.	33 Macquarie-place, Sydney.
13	Totolos, A.	Beatrice-street, Balgowlah.
16	Treffone, D.	50 Holmwood-street, Newtown.
46	Vyle, C.	14 Jones-street, Pyrmont.
231	Walker, W. A.	11 Fanning-street, Tempe.
238	Wallace, J. D.	79 Cabarita-road, Cabarita.
274	Warner, W. C	6 Cambridge-st., Suspension Bridge, North Sydney.
178	Weeks, T. E.	"Auvergue," Parramatta-road, Haberfield.

Accredited Inspectors—*continued.*

Cert. No.	Name.	Address.
	Sydney and Suburbs—continued.	
160	Wildridge, A. H. ...	76 Pitt-street, Sydney.
14	Wildridge, R.	76 Pitt-street, Sydney.
286	Willes, F. C.	Pine-street, North Sydney.
104	Wilson, J. A.	34 Jones-street, Sydney.
276	Young, W.	31 Bruce-street, Rezelle.
	Newcastle and District.	
117	Cameron, T.	11 Rowan-street, Merewether.
278	Corrigan, L. R. ...	Beach-street, Newcastle.
271	Costa, R. A.	Lockyer-street, Adamstown.
158	Craig, H.	23 Janet-street, Merewether.
125	Dalby, G. W.....	16 Crown-street, Stockton.
56	Dick, Jas.	20 Fitzroy-street, Mayfield.
74	Dick, Wm.	Fern-street, Islington.
104	Ellis, R. G.	Kerr-street, Mayfield.
127	McIntyre, J. P. ...	Robert-street, Mayfield.
287	Mills, R. H.	115 Ingall-street, Mayfield.
87	Morrison, D. N.....	c/o Morrison and Bearby Ltd., Carrington.
11	Rodgers, J. E. ...	Church-street West, Newcastle.
290	Rodgers, J. S.	298 King-street, Newcastle.
237	Rodgers, R. N.	A.M.P. Chambers, Hunter-street, Newcastle.
73	Taylor, A.	19 Hudson-street, Hamilton, Newcastle.
	Country Districts.	
	North.	
198	Wearne, Wm.	Emmaville.
256	Rollo, A. J.	72 White-street, Tamworth.
	North Coast.	
102	Wood, E. H.	Crane-street, Ballina.
247	Bates, H. D.	Blackalls-avenue, Blackall, Lake Macquaric.
78	Issacs, A. R.	c/o Colonial Sugar Refining Co. Ltd., Broadwater, Richmond River.
244	Johnston, W.....	Forster, Cape Hawke.
71	Smith, E. W.	Coff's Harbour, Jetty.
59	Mathews, T. B. ...	c/o Colonial Sugar Refining Co. Ltd., Condong, Tweed River.
114	Frewin, F. A.	31 Prince-street, Grafton.
245	Cassels, R.	Harwood, Clarence River.
262	Henderson, W. J.	Harwood, Clarence River.
152	Cliff, R. C.	c/o Kempsey Electric Light and Power Supply Co. Ltd.
57	Guthrie, A.	157 Molesworth-street, Lismore.
65	Woodley, E. H.....	Victoria-street, Taree.
	South.	
107	Allibon, H.....	c/o J. Hall, George-st., Deniliquin.
33	Coutts, H. K.	Town Hall, Goulburn.
	South Coast.	
82	Harrison, G.	Kinghorn-street, Nowra.
140	Noble, J.	Kinghorn-street, Nowra.
35	Jones, S. C.	c/o Electrolytic Refining Co. Ltd., Port Kembla.
100	Adamson, D. J.....	Mercury-street, Wollongong.
197	Clark, J. C. B.	Stanley-street, Wollongong.
103	Sharp, J. W.	cr. Ocean and Edward streets, Wollongong.
279	Shepherd, W. F. ...	Finlayson-street, Wollongong.
	West.	
224	Danks, J. R. W. ...	Technical College, Broken Hill.
164	Giffin, J.	Proprietary Mine, Broken Hill.
169	McAskill, A. W. ...	Junction Mine, Broken Hill.
201	Reece, T. A.	Electric Light Works, Broken Hill.
163	Woolcock, H. A. ...	325 William-street, Broken Hill.
26	Parker, E.	Hassan's Walls road, Lithgow.
138	Donovan, D.	Canonbar, via Nyngan.
243	Folster, W.	Box 107 P.O., Orange.

The following companies have on their respective staffs persons holding the Minister's certificate of approval to inspect boilers, &c., under the Boiler Inspection Regulations :—

Atlas Assurance Co., Ltd., Sydney.
Australian Alliance Assurance Co., Sydney.
Australian Mutual Fire Insurance Society Ltd., Sydney.
British Equitable Assurance Co., Ltd., Sydney.
City Mutual Insurance Co., Ltd., Sydney.
Colonial Mutual Fire Insurance Co., Ltd., Sydney.
Commercial Union Assurance Co., Sydney.
Co-operative Insurance Co. of Australia Ltd., Sydney.
Eagle, Star, and British Dominions Insurance Co., Ltd., Sydney.
Employers' Liability Assurance Corporation Ltd., Sydney.
Farmers' and Settlers' Co-op. Insurance Co. of Australia Ltd., Sydney.
Federal Insurance Co., Ltd., Sydney.
Insurance Office of Australia Ltd., Sydney.
Liverpool and London and Globe Insurance Co., Ltd., Sydney.
London Guarantee and Accident Co., Ltd., Sydney.
London and Lancashire Fire Insurance Co., Ltd., Sydney.
Manufacturers' Mutual Accident Assurance Assn. Ltd, Sydney.
Mercantile Mutual Fire Insurance Co., Ltd., Sydney.
New Zealand Insurance Co., Ltd., Sydney.
North British and Mercantile Insurance Co., Ltd., Sydney.
Phoenix Assurance Co., Ltd., Sydney.
Queensland Insurance Co., Sydney.
Royal Exchange Insurance, Sydney.
Royal Insurance Co., Ltd., Sydney.
Southern Insurance Association Ltd., Sydney.
Standard Fire and Marine Insurance Co. of New Zealand Ltd., Sydney.
Sydney Fire Office Ltd., Sydney.
The South British Insurance Co., Ltd., Sydney.
Union Assurance Society Ltd., Sydney.
Union Marine Insurance Co., Ltd., Sydney.
United Insurance Co., Ltd., Sydney.
Yorkshire Insurance Co., Ltd., Sydney.

Appendix I.

Persons employed, by Class of Factory, Classified by Industry—1930.

THE STATE.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
CLASS 1.—TREATING RAW MATERIALS, THE PRODUCT OF PASTORAL PURSUITS.												
(a) Animal Products												
Boiling-down and tallow-refining	8	...	...	3	...	5	...	71	...	79	...	79
Glue	5	1	7	3	6	4	15	120	31	128	59	187
Tanning	58	14	...	26	...	31	...	575	1	646	1	647
Wool-scouring and fellmongering	32	7	35	14	25	39	47	561	40	621	147	768
Other animal products	20	53	...	81	...	72	3	803	13	1,009	16	1,025
Total	123	75	42	127	31	151	65	2,130	85	2,483	223	2,706
(b) Vegetable Products.												
Chaff-cutting	74	1	...	3	...	5	...	263	...	272	...	272
Total, Class 1	197	76	42	130	31	156	65	2,393	85	2,755	223	2,978
CLASS 2.—OILS AND FATS—ANIMAL AND VEGETABLE.												
Oil and grease	12	1	...	10	...	19	...	159	...	189	...	189
Soap, candles, &c.	19	19	19	44	32	60	50	367	58	490	159	649
Total, Class 2	31	20	19	54	32	79	50	526	58	679	159	838
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &C.												
Asphalt	21	3	...	11	...	11	...	105	...	130	...	130
Bricks and tiles	139	5	2	46	1	77	3	637	1	765	7	772
Glass and glass bottles	3	19	...	10	...	13	...	312	...	354	...	354
Glass (ornamental)	40	32	2	79	4	125	...	333	4	569	10	579
Lime, plaster, and cement	16	1	...	9	...	8	...	230	...	248	...	248
Marble and slate	20	...	...	4	...	18	...	100	1	122	1	123
Modelling and fibrous plaster	43	2	...	12	...	14	1	105	...	133	1	134
Monumental masonry	24	...	...	8	...	15	...	158	...	181	...	181
Pottery and earthenware	17	13	...	21	...	40	1	312	8	386	9	395
Stone-dressing	53	4	...	7	...	23	...	321	...	355	...	355
Other works	25	2	...	18	1	22	...	228	2	270	3	273
Total, Class 3	401	81	4	225	6	366	5	2,841	16	3,513	31	3,544
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	3	...	...	...	...	...	...	4	...	4	...	4
Boxes and packing-cases	62	12	1	29	1	51	3	445	5	537	10	547
Cooperage	12	3	...	10	...	23	...	149	...	185	...	185
Joinery	379	34	...	186	...	333	...	1,423	5	1,976	5	1,981
Saw-milling—Timber	428	15	...	103	5	168	1	1,757	...	2,043	6	2,049
Firewood	245	1	...	7	3	21	...	333	6	362	9	371
Wood-turning	13	3	...	9	...	13	...	46	...	71	...	71
Other works	49	7	3	24	14	27	5	186	14	244	36	280
Total, Class 4	1,191	75	4	368	23	636	9	4,343	30	5,422	66	5,488
CLASS 5.—METAL WORKS, MACHINERY, &C.												
Agricultural implements	12	6	...	12	...	16	...	79	...	113	...	113
Brass and copper	82	15	3	97	4	106	2	540	5	758	14	772
Cutlery	28	1	...	12	4	17	1	137	...	167	5	172
Engineering	350	67	...	482	...	915	3	5,444	2	6,908	5	6,913
Galvanised iron	72	21	1	168	2	226	4	1,243	1	1,658	8	1,666
Iron works, foundries, and boilermaking	212	62	1	248	2	470	7	4,147	22	4,927	32	4,959
Iron safes and doors	4	1	...	9	...	23	...	18	...	51	...	51
Lead-mills	4	1	...	1	...	...	...	18	...	20	...	20
Railway carriage works	2	...	...	38	...	65	2	156	6	259	8	267
Smelting and ore dressing	3	...	...	...	...	...	...	5	...	5	...	5
Stoves and ovens	9	10	3	36	7	52	12	422	31	520	53	573
Tinsmithing	26	77	31	132	66	142	91	480	101	831	289	1,120
Wire-working	32	21	...	89	2	132	11	1,185	8	1,427	21	1,448
Other metal works	135	62	12	205	15	199	35	870	29	1,336	91	1,427
Plumbing	28	1	1	14	5	28	2	245	1	288	9	297
Farriery	9	...	...	1	...	...	...	17	...	18	...	18
Total, Class 5	1,008	345	52	1,544	107	2,391	170	15,006	206	19,286	535	19,821
CLASS 6.—CONNECTED WITH FOOD AND DRINK AND THE PREPARATION THEREOF.												
(a) Animal Food.												
Bacon	22	1	...	10	...	14	...	174	...	199	...	199
Butchers' smallgoods	1,439	7	2	34	1	69	5	1,773	12	1,883	20	1,903
Margarine	2	...	...	3	...	6	...	25	...	34	...	34
Meat-preserving	8	2	...	7	5	12	1	93	18	114	24	138
Total (*a*)	1,471	10	2	54	6	101	6	2,065	30	2,230	44	2,274

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total
CLASS 6.—CONNECTED WITH FOOD AND DRINK AND THE PREPARATION THEREOF—*continued.*												
(b) Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.												
Biscuits	12	84	113	131	224	139	254	318	352	672	943	1,615
Bread and pastry	1,774	47	7	443	21	550	50	3,185	397	4,225	475	4,700
Confectionery	194	56	205	107	298	136	367	841	469	1,140	1,339	2,479
Corn-flour and oatmeal	21	16	19	39	46	59	68	295	90	409	223	632
Flour-milling	55	3	1	34	7	61	4	721	4	819	16	835
Jam and fruit preserving	41	2	12	24	34	45	33	310	126	381	205	586
Pickles, sauces, and vinegar	12	2	2	17	5	22	9	114	48	155	64	219
Poultry foods and dog biscuits	13	1	...	4	1	5	...	44	1	54	2	56
Self-raising flour	4	2	7	6	7	2	15	10	8	20	37	57
Sugar-refining	8	3	7	15	8	24	10	610	23	652	48	700
Total	2,134	216	373	820	651	1,043	810	6,448	1,518	8,527	3,352	11,879
(c) Drinks and Stimulants.												
Aerated waters and cordials	179	10	1	75	12	78	14	454	12	617	39	656
Brewing	13	2	2	1	8	15	6	695	3	713	19	732
Condiments, coffee, spices, &c.	44	6	49	24	84	20	127	181	163	231	423	654
Distillery	1	...	...	...	...	...	...	11	...	11	...	11
Ice and refrigerating	239	9	1	44	4	62	2	858	1	973	8	981
Tea blending and packing	15	22	21	10	30	9	31	93	76	134	158	292
Wine, spirits, and beer bottling	50	...	...	10	...	25	1	238	32	273	33	306
Total	541	49	74	164	138	209	181	2,530	287	2,952	680	3,632
(d) Narcotics.												
Tobacco, cigars, and cigarettes	7	20	76	55	223	64	342	685	738	824	1,379	2,203
Total, Class 6	4,153	295	525	1,093	1,018	1,417	1,339	11,728	2,573	14,533	5,455	19,988
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(a) Textile.												
Woollen mills	35	111	207	158	317	183	438	715	900	1,167	1,862	3,029
(b) Dress.												
Boots and shoes :—Order made	249	22	7	83	8	88	11	1,190	39	1,383	65	1,448
Factory made	96	97	182	210	274	234	257	1,378	789	1,919	1,502	3,421
Clothing :—Men's slops	54	8	128	37	277	48	248	302	733	395	1,386	1,781
Women's slops	145	2	223	16	390	15	395	131	1,070	164	2,078	2,242
Tailoring	260	14	118	42	429	56	406	701	1,461	813	2,414	3,227
Corsets	3	...	34	2	85	3	139	17	288	22	546	568
Dressmaking and millinery :—												
Makers' material	249	3	349	11	630	9	658	105	1,399	128	3,036	3,164
Customers' material	112	1	25	3	60	5	66	22	179	31	330	361
Dye works	41	11	21	32	8	33	36	281	97	357	162	519
Furriery	27	4	5	11	22	16	34	79	53	110	114	224
Hats and caps	27	21	62	54	117	52	183	264	301	391	663	1,054
Hosiery and knitting	80	54	222	98	435	166	538	563	1,102	881	2,297	3,178
Oilskin and waterproof clothing	7	...	...	...	2	1	2	17	16	18	20	38
Shirts, ties, and scarves	67	6	232	29	307	34	328	133	719	202	1,586	1,788
Umbrellas	6	...	...	1	5	2	18	25	44	28	67	95
Underclothing	151	15	210	24	329	36	390	101	609	176	1,538	1,714
Wigs and hair work	6	...	2	2	7	...	3	7	5	9	17	26
Total	2,280	258	1,820	655	3,385	798	3,712	5,316	8,904	7,027	17,821	24,848
(c) Fibrous Materials and Textiles not elsewhere included.												
Bags and sacks	10	...	11	3	18	3	19	58	43	64	91	155
Rope and twine	6	8	7	38	11	33	23	70	15	149	56	205
Tents and tarpaulins	17	4	4	4	13	7	14	36	64	51	95	146
Total	33	12	22	45	42	43	56	164	122	264	242	506
Total, Class 7	2,348	381	2,049	858	3,744	1,024	4,206	6,195	9,926	8,458	19,925	28,383
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	20	5	...	34	...	63	2	219	11	321	13	334
Electrotyping and stereotyping, type founding, and printers' materials	17	9	4	18	2	24	3	204	4	255	13	268
Paper bags and boxes	20	16	89	23	152	33	184	144	253	216	678	894
Paper mills, cardboard, and strawboard	11	9	45	28	73	72	66	294	148	403	332	735
Photo.-engraving, photo.-lithography, and photo. materials	42	2	5	20	27	29	68	117	199	168	299	467
Printing, bookbinding, and manufacturing stationery	593	214	150	615	340	765	413	4,223	874	5,817	1,777	7,594
Total, Class 8	703	255	293	738	594	986	736	5,201	1,489	7,180	3,112	10,292
CLASS 9.—MUSICAL INSTRUMENTS, &c.												
Pianos, organs, and sewing-machines	28	7	2	29	2	66	6	209	1	311	9	320

Appendix I—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	3	...	...	1	3	3	3	3	1	7	7	14
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY, HARNESS, &c.												
Coaches and waggons	128	5	...	33	1	60	2	364	11	462	14	476
Cycles and motor cars	1,320	130	...	707	1	902	5	3,384	9	5,123	15	5,138
Perambulators, &c.	5	4	...	3	...	11	1	33	...	51	1	52
Saddlery, harness, &c.	22	6	...	9	1	5	1	72	7	92	9	101
Naves, spokes, &c.	1	...	...	...	...	...	...	1	...	1	...	1
Whips	2	...	...	...	...	2	...	4	...	6	...	6
Total, Class 11	1,478	145	...	752	3	980	9	3,858	27	5,735	39	5,774
CLASS 12.—SHIPBUILDING, FITTINGS, &c.												
Docks and slips	1	...	...	...	...	...	...	1	...	1	...	1
Sailmaking	5	...	...	...	1	2	...	15	6	17	7	24
Ship and boat building	35	2	...	22	...	52	...	359	...	435	...	435
Total, Class 12	41	2	...	22	1	54	...	375	6	453	7	460
CLASS 13.—FURNITURE, BEDDING, &c.												
Bedding, flock, and upholstery	101	14	23	67	63	89	90	399	228	569	404	973
Carpet-sewing	3	...	...	1	4	2	5	14	26	17	35	52
Iron bedsteads	3	1	...	...	...	1	...	35	...	37	...	37
Billiard tables	...	...	...	...	...	...	...	...	...	...	...	...
Chair-making	21	4	...	11	2	28	2	155	3	198	7	205
Furniture and cabinet making—												
European	248	45	1	179	1	257	14	1,088	4	1,569	20	1,589
Chinese	9	...	...	...	...	...	...	37	...	37	...	37
Bamboo and wicker	5	1	...	2	...	5	...	50	...	58	...	58
Picture frames	16	1	1	6	3	9	5	37	13	53	22	75
Window blinds	12	4	1	10	2	8	9	31	28	53	40	93
Total, Class 13	418	70	26	276	75	399	125	1,846	302	2,591	528	3,119
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c.	20	10	11	25	33	16	47	154	110	205	201	406
Chemical works and drugs	75	42	31	75	76	65	120	447	176	629	403	1,032
Fertilisers	7	1	...	5	...	4	...	118	...	128	...	128
Perfumes and essences	25	10	27	26	63	33	67	61	73	130	230	360
Paints and varnishes	29	31	3	37	21	68	16	360	32	496	72	568
Other Minor Works	9	2	...	7	1	7	3	82	...	98	4	102
Total, Class 14	165	96	72	175	194	193	253	1,222	391	1,686	910	2,596
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	36	...	...	15	3	21	4	98	4	134	11	145
Surgical instruments	10	3	...	3	2	2	1	27	4	35	7	42
Other Minor Works	6	...	...	...	...	3	...	7	...	10	...	10
Total, Class 15	52	3	...	18	5	26	5	132	8	179	18	197
CLASS 16.—TIMEPIECES, JEWELLERY, AND PLATEDWARE.												
Electroplating	37	3	...	26	1	38	...	136	2	203	3	206
Jewellery	79	8	3	21	17	36	16	307	21	372	57	429
Total, Class 16	116	11	3	47	18	74	16	443	23	575	60	635
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	141	87	22	379	39	542	65	1,329	110	2,337	236	2,573
Electric light and power works	309	3	2	40	...	49	1	1,004	2	1,096	5	1,101
Gas works	41	3	...	14	...	32	...	933	...	982	...	982
Lamps and gas mantles	8	2	8	6	57	8	42	40	34	56	141	197
Hydraulic power	2	...	2	...	...	5	1	1	3	6	6	12
Coke works	7	...	...	12	...	5	...	147	...	164	...	164
Total, Class 17	508	95	34	451	96	641	109	3,454	149	4,641	388	5,029
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy Leather	16	22	29	27	53	29	51	194	82	272	215	487
Leather belting	5	3	...	4	...	2	...	38	...	47	...	47
Portmanteaux	12	10	3	13	17	12	13	87	45	122	78	200
Other Minor Works	21	10	6	12	31	17	29	70	51	109	117	226
Total, Class 18	54	45	38	56	101	60	93	389	178	550	410	960
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting	7	1	...	1	...	4	2	18	1	24	3	27
Brooms, brushes	37	16	21	22	41	29	60	166	42	233	164	397
Florists and seedsmen	7	3	14	1	8	1	2	17	12	22	36	58
Laundries—European	145	8	82	28	180	25	254	239	860	300	1,376	1,676
Chinese	23	...	1	...	2	2	2	25	3	27	8	35
Rubber goods	13	22	80	69	115	91	119	539	257	721	571	1,292
Toys	17	...	10	3	10	8	14	37	7	48	41	89
Painting and sign-writing	33	8	...	35	2	31	2	267	5	341	9	350
Other Minor Works	52	26	50	83	51	90	50	477	129	676	280	956
Total, Class 19	334	84	258	242	409	281	505	1,785	1,316	2,392	2,488	4,880
Total, all Industries	13,229	2,086	3,421	7,079	6,462	9,832	7,702	61,949	16,785	80,946	34,370	115,316

Appendix II.

Factories, by Number of Persons employed—1926-1930.

Year	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																	
1926	2,970	1,841	851	383	217	219	123	58	82	31	32	9	7	7	4	3	6,837
1927	3,013	1,790	843	375	235	236	118	72	64	39	27	16	3	11	2	3	6,877
1928	3,028	1,837	850	374	237	218	105	68	71	33	16	17	5	10	3	4	6,876
1929	3,474	1,864	846	354	252	226	112	52	66	29	26	10	5	13	2	2	7,333
1930	4,554	1,838	776	289	161	155	68	42	46	22	15	8	6	7	2	2	7,991
Newcastle District.																	
1926	755	298	100	23	18	7	7	1	2	2	...	1	2	...	...	1	1,217
1927	723	280	81	28	12	8	2	2	5	2	1	...	1	...	1	1	1,147
1928	748	291	82	23	14	8	2	2	3	4	1	..	1	1	...	1	1,181
1929	875	306	80	23	6	12	1	2	3	1	2	...	1	1	...	1	1,314
1930	948	255	50	18	9	9	3	2	2	1	...	...	...	1	1	1	1,300
Rest of State.																	
1926	2,618	882	207	34	10	6	5	3	3	2	3	1	...	...	1	...	3,775
1927	2,317	842	170	28	10	5	2	2	4	3	3	...	2	1	...	...	3,389
1928	2,313	839	159	20	6	10	2	2	6	2	2	...	2	...	1	...	3,364
1929	2,655	787	164	26	5	10	2	4	1	3	3	2	..	...	1	...	3,663
1930	3,130	659	105	19	4	7	4	...	4	3	1	1	1	...	...	...	3,938
State.																	
1926	6,343	3,021	1,158	440	245	232	135	62	87	35	35	11	9	7	5	4	11,829
1927	6,083	2,912	1,094	431	257	249	122	76	73	44	31	16	6	12	3	4	11,413
1928	6,089	2,967	1,091	417	257	236	109	72	80	39	19	17	8	11	4	5	11,421
1929	7,004	2,957	1,090	403	263	248	115	58	70	33	31	12	6	14	3	3	12,310
1930	8,632	2,752	931	326	174	171	75	44	52	26	16	9	7	8	3	3	13,229

Appendix III.

Factories, by Class and Number of Persons employed, 1930.

Class of Factory.	Number of Factories in which the number of persons employed is—																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750.	750 and under 1,000.	1,000 and over.	
Metropolitan District.																	
I. Treating raw material, produet of pastoral pursuits	41	33	18	3	6	6	2	1	3	2	1	...	...	...	...	...	116
II. Oils and fats—animal, vegetable, &e.	3	6	3	2	...	3	...	...	2	...	1	...	...	...	...	...	20
III. Processes relating to stone, clay, glass, &e. ...	116	69	22	17	6	3	...	1	3	1	...	1	...	...	...	...	239
IV. Working in wood	284	117	42	8	4	3	...	1	...	...	...	...	...	...	...	...	459
V. Metal works, machinery, &e.	365	243	118	37	18	14	9	4	6	1	1	2	1	1	...	...	820
VI. Conneeted with food and drink, &e.	1,595	279	90	30	18	18	12	2	5	1	3	...	2	3	1	1	2,060
VII. Clothing and textile fabries, &e.	1,053	425	186	82	57	57	22	18	16	8	6	3	2	1	...	1	1,937
VIII. Books, paper, printing, engraving, &e.	153	148	92	39	20	14	7	5	5	1	3	2	...	1	...	...	490
IX. Musieal instruments, &e.	9	7	7	1	...	1	...	1	...	...	...	...	...	...	...	...	26
X. Arms and explosives	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XI. Vehieles and fittings, saddlery, harness, &e. ...	399	139	42	13	7	5	2	1	...	...	...	...	...	...	...	...	608
XII. Ship and boat building, &e.	16	11	4	...	...	2	...	2	...	...	...	...	...	...	...	...	35
XIII. Furniture, bedding, &e.	179	105	40	13	4	8	1	4	...	...	...	...	...	...	...	...	354
XIV. Drugs, chemieals, and by-produets	49	62	19	6	5	4	6	...	1	3	...	...	...	...	...	...	155
XV. Surgieal and other scientifie instruments	30	12	5	...	...	...	...	...	...	...	...	...	...	...	...	...	47
XVI. Jewellery and plated-ware, &e.	64	32	12	2	...	...	1	...	...	...	...	...	...	...	...	...	111
XVII. Heat, light and power	90	39	26	10	7	6	2	2	1	2	...	1	1	...	...	...	187
XVIII. Leatherware (exeepting saddlery and harness) ...	12	18	11	7	1	1	2	...	1	1	...	...	...	...	...	...	54
XIX. Minor wares not elsewhere included	95	91	39	19	8	10	2	...	3	2	...	...	...	...	1	...	270
Total	4,554	1,838	776	289	161	155	68	42	46	22	15	8	6	7	2	2	7,991
Newcastle District.																	
I. Treating raw material, produet of pastoral pursuits	11	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	13
II. Oils and fats—animal, vegetable, &e.	1	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	4
III. Proeesses relating to stone, clay, glass, &e. ...	23	16	4	1	3	...	...	...	...	...	...	...	...	...	...	...	47
IV. Working in wood	111	39	8	4	...	...	...	...	...	...	...	...	...	...	...	...	162
V. Metal work, machinery, &e.	44	17	3	4	...	2	2	...	1	...	...	...	...	...	1	1	76
VI. Connected with food and drink, &e.	443	55	12	3	1	...	...	1	...	1	...	...	...	...	...	...	516
VII. Clothing and textile fabrics, &e.	89	40	6	5	4	1	...	1	...	...	...	...	...	...	...	...	146
VIII. Books, paper, printing, engraving, &e.	14	15	3	...	...	3	...	...	...	...	...	...	...	...	...	...	35
IX. Musieal instruments, &e.	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
X. Arms and explosives	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XI. Vehieles and fittings, saddlery, harness, &e. ...	114	40	7	...	...	...	...	...	...	...	...	...	...	...	...	...	161
XII. Ship and boat building, &e.	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XIII. Furniture, bedding, &e.	24	9	1	1	...	...	...	...	...	...	...	...	...	...	...	...	35
XIV. Drugs. chemieals, and by-products	2	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	5
XV. Surgieal and other scientific instruments	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XVI. Jewellery and plated-ware, &e.	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
XVII. Heat, light and power	52	10	3	...	...	2	1	...	...	...	...	...	...	...	...	...	68
XVIII. Leatherware (excepting saddlery and harness) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XIX. Minor wares not elsewhere ineluded	7	7	2	...	1	...	...	...	...	...	...	...	...	...	...	...	17
Total	948	255	50	18	9	9	3	2	2	1	...	...	...	1	1	1	1,300

Appendix III—*continued.*

Class of Factory.	Number of Factories in which the number of persons employed is -																Total.
	Under 4.	4 and under 10.	10 and under 20.	20 and under 30.	30 and under 40.	40 and under 60.	60 and under 80.	80 and under 100.	100 and under 150.	150 and under 200.	200 and under 300.	300 and under 400.	400 and under 500.	500 and under 750	750 and under 1,000.	1,000 and over.	
Rest of State.																	
I. Treating raw material, product of pastoral pursuits	29	33	5	1	...	...	...	...	...	...	...	...	...	...	...	...	68
II. Oils and fats—animal, vegetable, &c.	4	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7
III. Processes relating to stone, clay, glass, &c. ...	67	38	6	...	2	...	...	...	...	2	...	...	...	...	...	...	115
IV. Working in wood	418	126	23	2	1	...	...	...	...	...	...	...	...	...	...	...	570
V. Metal work, machinery, &c.	82	22	2	1	...	1	...	...	1	...	1	1	1	...	...	...	112
VI. Connected with food and drink, &c.	1,410	129	26	7	...	1	2	...	2	...	...	...	...	...	...	...	1,577
VII. Clothing and textile fabrics, &c.	201	55	2	1	...	2	2	...	1	1	...	...	...	...	...	...	265
VIII. Books, paper, printing, engraving, &c.	110	50	16	1	...	1	...	...	...	...	...	...	...	...	...	...	178
IX. Musical instruments, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
X. Arms and explosives...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XI. Vehicles and fittings, saddlery, harness, &c. ...	555	139	12	2	1	...	...	...	...	...	...	...	...	...	...	...	709
XII. Ship and boat building, &c.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
XIII. Furniture, bedding, &c.	25	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	29
XIV. Drugs, chemicals, and by-products	3	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	5
XV. Surgical and other scientific instruments	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
XVI. Jewellery and plated-ware, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XVII. Heat, light and power	202	39	10	2	...	...	...	...	...	...	...	...	...	...	...	...	253
XVIII. Leatherware (excepting saddlery and harness) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
XIX. Minor wares, not elsewhere included	21	21	3	2	...	...	...	...	...	...	...	...	...	...	...	...	47
Total	3,130	659	105	19	4	7	4	...	4	3	1	1	1	...	...	...	3,938
The State.																	
I. Treating raw material, product of pastoral pursuits	81	67	23	4	6	6	2	1	4	2	1	...	...	...	...	...	197
II. Oils and fats—animal, vegetable, &c.	8	11	4	2	...	3	...	...	2	...	1	...	...	...	...	...	31
III. Processes relating to stone, clay, glass, &c. ...	206	123	32	18	11	3	...	1	3	3	...	1	...	...	...	...	401
IV. Working in wood	813	282	73	14	5	3	...	1	...	...	...	...	...	...	...	...	1,191
V. Metal works, machinery, &c.	491	282	123	42	18	17	11	4	8	1	2	3	2	2	1	1	1,008
VI. Connected with food and drink. &c.	3,448	463	128	40	19	19	14	3	7	2	3	...	2	3	1	1	4,153
VII. Clothing and textile fabrics, &c.	1,343	520	194	88	61	60	24	19	17	9	6	3	2	1	...	1	2,348
VIII. Books, paper, printing, engraving, &c.	277	213	111	40	20	18	7	5	5	1	3	2	...	1	...	...	703
IX. Musical instruments, &c.	10	8	7	1	...	1	...	1	...	...	...	...	...	...	...	...	28
X. Arms and explosives	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
XI. Vehicles and fittings, saddlery, harness, &c. ...	1,068	318	61	15	8	5	2	1	...	...	...	...	...	...	...	...	1,478
XII. Ship and boat building, &c.	21	12	4	...	...	2	...	2	...	...	...	...	...	...	...	...	41
XIII. Furniture, bedding, &c.	228	118	41	14	4	8	1	4	...	...	...	...	...	...	...	...	418
XIV. Drugs, chemicals, and by-products	54	64	19	6	5	7	6	...	1	3	...	...	...	...	...	...	165
XV. Surgical and other scientific instruments	35	12	5	...	...	...	...	...	...	...	...	...	...	...	...	...	52
XVI. Jewellery and plated-ware, &c.	69	32	12	2	...	...	1	...	...	...	...	...	...	...	...	...	116
XVII. Heat, light, and power	314	88	39	12	7	8	3	2	1	2	...	...	1	1	...	...	508
XVIII. Leatherware, excepting saddlery and harness ...	12	18	11	7	1	1	2	...	1	1	...	...	...	...	...	...	54
XIX. Minor wares, not elsewhere included	123	119	44	21	9	10	2	...	3	2	...	...	...	...	1	...	334
Total	8,632	2,752	931	326	174	171	75	44	52	26	16	9	7	8	3	3	13,229

Appendix IV.

Persons employed, by Class of Factory, Classified by Industry—1930.

Metropolitan District.

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total
Class 1.—Treating Raw Material, the Product of Pastoral Pursuits.												
(a) *Animal Products.*												
Boiling-down and tallow-refining	7	...	...	2	...	3	...	60	...	65	...	65
Glue	2	1	7	2	6	4	15	93	31	100	59	159
Tanning	54	14	...	26	...	30	...	551	1	621	1	622
Wool-scouring and fellmongering	23	7	35	12	25	32	47	510	40	561	147	708
Other animal products	15	37	...	59	...	39	3	535	13	670	16	686
Total	101	59	42	101	31	108	65	1,749	85	2,017	223	2,240
(b) *Vegetable Products*												
Chaff-cutting	15	...	...	...	...	2	...	45	...	47	...	47
Total, Class 1	116	59	42	101	31	110	65	1,794	85	2,064	223	2,287
Class 2.—Oils and Fats—Animal and Vegetable.												
Oil and grease	11	1	...	10	...	19	...	156	...	186	...	186
Soap, candles, &c.	9	17	19	38	30	58	50	332	58	445	157	602
Total, Class 2	20	18	19	48	30	77	50	488	58	631	157	788

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &c.												
Asphalt	15	3	...	6	...	8	...	55	...	72	...	72
Bricks and tiles	67	5	2	28	1	37	3	375	1	445	7	452
Glass and glass bottles	3	19	...	10	...	13	...	312	...	354	...	354
Glass (ornamental)	36	32	2	78	4	121	...	329	4	560	10	570
Lime, plaster, and cement	7	1	...	6	...	5	...	15	...	27	...	27
Marble and slate	18	...	...	4	...	18	...	91	...	113	...	113
Modelling and fibrous plaster	24	1	...	3	...	9	...	61	...	74	...	74
Monumental masonry	14	...	...	4	...	9	...	124	...	137	...	137
Pottery and earthenware	14	13	...	20	...	39	1	297	8	369	9	378
Stone-dressing	18	4	...	5	...	16	...	118	...	143	...	143
Other works	23	2	...	14	1	22	...	208	2	246	3	249
Total, Class 3	239	80	4	178	6	297	4	1,985	15	2,540	29	2,569
CLASS 4.—WORKING IN WOOD.												
Beehives, &c.	3	...	...	...	...	...	...	4	...	4	...	4
Boxes and packing-cases	54	12	1	28	1	44	3	404	4	488	9	497
Cooperage	11	3	...	10	...	21	...	145	...	179	...	179
Joinery	230	29	...	132	...	237	...	980	5	1,378	5	1,383
Saw-milling—Timber	70	2	...	36	5	42	1	385	...	465	6	471
Firewood	36	1	...	...	3	5	...	60	6	66	9	75
Wood-turning	13	3	...	9	...	13	...	46	...	71	...	71
Other works	42	4	3	22	14	24	5	154	14	204	36	240
Total, Class 4	459	54	4	237	23	386	9	2,178	29	2,855	65	2,920
CLASS 5.—METAL WORKS, MACHINERY, &c.												
Agricultural implements	8	6	...	11	...	16	...	66	...	99	...	99
Brass and copper	79	15	3	94	4	102	2	399	5	610	14	624
Cutlery	26	...	...	7	4	11	1	112	...	130	5	135
Engineering	283	63	...	387	...	752	3	3,321	2	4,523	5	4,528
Galvanised iron	64	19	1	85	2	127	4	500	1	731	8	739
Iron works, foundries, and boilermaking	146	41	1	187	1	341	7	2,647	21	3,216	30	3,246
Iron safes and doors	4	1	...	9	...	23	...	18	...	51	...	51
Lead-mills	4	1	...	1	...	...	...	18	...	20	...	20
Railway carriage works	2	...	...	38	...	65	2	156	6	259	8	267
Smelting and ore dressing	3	...	...	...	...	...	...	5	...	5	...	5
Stoves and ovens	7	10	3	36	7	48	12	412	31	506	53	559
Tinsmithing	19	76	31	127	66	138	91	452	101	793	289	1,082
Wire-working	28	12	...	27	2	59	2	473	2	571	6	577
Other metal works	126	59	12	200	15	192	35	854	29	1,305	91	1,396
Plumbing	14	1	1	8	5	15	2	164	1	188	9	197
Farriery	7	...	...	1	...	...	...	13	...	14	...	14
Total, Class 5	820	304	52	1,218	106	1,889	161	9,610	199	13,021	518	13,539
CLASS 6.—CONNECTED WITH FOOD AND DRINK, AND THE PREPARATION THEREOF.												
(a) *Animal Food.*												
Bacon	9	...	...	5	...	12	...	108	...	125	...	125
Butchers' smallgoods	812	6	2	25	...	43	5	1,042	6	1,116	13	1,129
Margarine	1	...	...	3	...	6	...	22	...	31	...	31
Meat-preserving	8	2	...	7	5	12	1	93	18	114	24	138
Total	830	8	2	40	5	73	6	1,265	24	1,386	37	1,423
(b) *Vegetable Foods, including Products not Food, but usually connected with the manufacture of Foods.*												
Biscuits	11	81	111	127	223	133	252	311	351	652	937	1,589
Bread and pastry	759	30	1	265	16	341	40	1,741	312	2,377	369	2,746
Confectionery	145	55	204	106	291	130	366	777	465	1,068	1,326	2,394
Corn-flour and oatmeal	16	6	16	12	30	33	38	157	55	208	139	347
Flour-milling	20	1	1	15	6	36	2	442	3	494	12	506
Jam and fruit preserving	22	2	12	11	31	37	23	175	97	225	163	388
Pickles, sauces, and vinegar	10	2	2	15	5	18	9	107	48	142	64	206
Poultry foods and dog biscuits	13	1	...	4	1	5	...	44	1	54	2	56
Self-raising flour	4	2	7	6	7	2	15	10	8	20	37	57
Sugar-refining	2	2	7	7	8	13	10	347	23	369	48	417
Total	1,002	182	361	568	618	748	755	4,111	1,363	5,609	3,097	8,706
(c) *Drinks and Stimulants.*												
Aerated waters and cordials	35	5	1	36	12	41	13	180	10	262	36	298
Brewing	8	1	2	1	8	11	6	630	3	643	19	662
Condiments, coffee, spices, &c.	35	5	45	24	69	18	119	165	156	212	389	601
Distillery	1	...	...	...	...	...	...	11	...	11	...	11
Ice and refrigerating	106	1	1	24	1	21	...	413	...	459	2	461
Tea blending and packing	15	22	21	10	30	9	31	93	76	134	158	292
Wine, spirits, and beer bottling	21	...	...	5	...	22	1	168	32	195	33	228
Total	221	34	70	100	120	122	170	1,660	277	1,916	637	2,553
(d) *Narcotics.*												
Tobacco, cigars, and cigarettes	7	20	76	55	223	64	342	685	738	824	1,379	2,203
Total, Class 6	2,060	244	509	763	966	1,007	1,273	7,721	2,402	9,735	5,150	14,885

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males	Females.	Males.	Females.	Total.
CLASS 7.—CLOTHING AND TEXTILE FABRICS, AND FIBROUS MATERIALS.												
(a) *Textile.*												
Woollen mills	31	99	170	128	259	159	347	634	810	1,020	1,586	2,606
(b) *Dress.*												
Boots and shoes—Order made	731	16	7	54	6	59	8	908	33	1,037	54	1,091
Factory made	94	95	181	203	268	228	252	1,333	767	1,859	1,468	3,327
Clothing—Men's slops	44	8	106	33	238	42	209	279	673	362	1,226	1,588
Women's slops	144	2	223	16	389	15	394	131	1,069	164	2,075	2,239
Tailoring	144	12	108	38	361	45	320	522	1,236	617	2,025	2,642
Corsets	3	...	34	2	85	3	139	17	288	22	546	568
Dressmaking and millinery—												
Makers' material	226	3	331	11	591	9	621	97	1,335	120	2,878	2,998
Customers' material	100	...	24	2	55	1	58	9	162	12	299	311
Dye works	35	11	21	31	6	31	34	272	97	345	158	503
Furriery	26	4	5	11	22	16	32	78	53	109	112	221
Hats and caps	27	21	62	54	117	52	183	264	301	391	663	1,054
Hosiery and knitting	76	54	220	98	432	166	536	559	1,097	877	2,285	3,162
Oilskin and waterproof clothing	7	...	...	...	2	1	2	17	16	18	20	38
Shirts, ties, and scarves	63	6	209	26	271	32	309	86	693	150	1,482	1,632
Umbrellas	5	...	...	1	2	2	18	25	42	28	62	90
Underclothing	145	15	208	24	321	35	381	96	601	170	1,511	1,681
Wigs and hair work	6	...	2	2	7	...	3	7	5	9	17	26
Total	1,876	247	1,741	606	3,173	737	3,499	4,700	8,468	6,290	16,881	23,171
(c) *Fibrous Materials and Textiles not elsewhere included.*												
Bags and sacks	8	...	11	2	18	2	19	50	43	54	91	145
Rope and twine	6	8	7	38	11	33	23	70	15	149	56	205
Tents and tarpaulins	16	4	4	4	13	7	14	34	63	49	94	143
Total	30	12	22	44	42	42	56	154	121	252	241	493
Total, Class 7 ...	1,937	358	1,933	778	3,474	938	3,902	5,488	9,399	7,562	18,708	26,270
CLASS 8.—BOOKS, PAPER, PRINTING, ENGRAVING.												
Die-sinking and engraving	20	5	...	34	...	63	2	219	11	321	13	334
Electrotyping and stereotyping, type founding, and printers' materials	16	9	4	18	2	24	3	203	4	254	13	267
Paper bags and boxes	19	16	88	23	152	33	182	143	251	215	673	888
Paper mills, cardboard, and strawboard ...	11	9	45	28	73	72	66	294	148	403	332	735
Photo-engraving, photo-lithography, and photo. materials	41	2	5	20	27	29	66	116	198	167	296	463
Printing, bookbinding, and manufacturing stationery	383	182	149	499	334	643	402	3,492	850	4,816	1,735	6,551
Total, Class 8	490	223	291	622	588	864	721	4,467	1,462	6,176	3,062	9,238
CLASS 9.—MUSICAL INSTRUMENTS, &C.												
Pianos, organs, and sewing machines ...	26	7	2	26	2	62	4	209	1	304	9	313
CLASS 10.—ARMS AND EXPLOSIVES.												
Explosives	3	...	...	1	3	3	3	3	1	7	7	14
CLASS 11.—VEHICLES AND FITTINGS, SADDLERY, HARNESS, &C.												
Coaches and waggons	41	2	...	16	1	35	2	184	11	237	14	251
Cycles and motor cars	550	69	...	367	1	521	4	1,935	8	2,892	13	2,905
Perambulators, &c.	5	4	...	3	...	11	1	33	...	51	1	52
Saddlery, harness, &c.	11	5	...	7	...	5	...	33	6	50	6	56
Naves, spokes, &c.	...	...	...	...	...	...	...	...	...	...	...	...
Whips	1	...	...	...	...	1	...	3	...	4	...	4
Total, Class 11	608	80	...	393	2	573	7	2,188	25	3,234	34	3,268
CLASS 12.—SHIPBUILDING, FITTINGS, &C.												
Docks and slips	1	...	...	...	...	...	...	1	...	1	...	1
Sailmaking	4	...	...	...	1	2	...	13	6	15	7	22
Ship and boat building	30	2	...	21	...	51	...	347	...	421	...	421
Total, Class 12	35	2	...	21	1	53	...	361	6	437	7	444

Appendix IV—*continued.*

Class of Factory.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		21 years and over.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
CLASS 13.—FURNITURE, BEDDING, &c.												
Bedding, flock, and upholstery	92	14	23	65	60	83	90	379	227	541	400	941
Carpet-sewing	3	...	...	1	4	2	5	14	26	17	35	52
Iron bedsteads	3	1	...	...	...	1	...	35	...	37	...	37
Billiard tables	...	...	...	...	...	...	...	...	...	...	...	...
Chair-making	19	4	...	10	1	22	1	143	2	179	4	183
Furniture and cabinet-making—												
European	199	42	1	168	1	240	14	999	3	1,449	19	1,468
Chinese	7	...	...	...	...	...	...	33	...	33	...	33
Bamboo and wicker	4	1	...	2	...	5	...	49	...	57	...	57
Picture frames	16	1	1	6	3	9	5	37	13	53	22	75
Window blinds	11	4	1	10	2	8	9	31	27	53	39	92
Total, Class 13	354	67	26	262	71	370	124	1,720	298	2,419	519	2,938
CLASS 14.—DRUGS, CHEMICALS, AND BY-PRODUCTS.												
Baking powder, blue, soda, &c.	19	10	11	25	33	16	47	150	110	201	201	402
Chemical works and drugs	71	42	31	75	76	60	120	392	176	569	403	972
Fertilisers	6	...	...	3	...	4	...	51	...	58	...	58
Perfumes and essences	24	10	27	26	63	33	67	59	73	128	230	358
Paints and varnishes	29	31	3	37	21	68	16	360	32	496	72	568
Other minor works	6	1	...	4	...	4	2	36	...	45	2	47
Total, Class 14	155	94	72	170	193	185	252	1,048	391	1,497	908	2,405
CLASS 15.—SURGICAL AND SCIENTIFIC APPLIANCES.												
Optical instruments	31	...	...	14	3	20	4	93	4	127	11	138
Surgical instruments	10	3	...	3	2	2	1	27	4	35	7	42
Other minor works	6	...	...	...	...	3	...	7	...	10	...	10
Total, Class 15	47	3	...	17	5	25	5	127	8	172	18	190
CLASS 16.—TIMEPIECES, JEWELLERY, AND PLATED WARE.												
Electroplating	34	3	...	26	1	37	...	132	2	198	3	201
Jewellery	77	8	3	21	17	36	16	303	21	368	57	425
Total, Class 16	111	11	3	47	18	73	16	435	23	566	60	626
CLASS 17.—LIGHT, HEAT, AND POWER.												
Electrical apparatus	126	86	22	349	36	476	52	1,186	109	2,079	219	2,316
Electric light and power works	41	...	2	7	...	15	1	403	2	425	5	430
Gas works	7	3	...	14	...	27	...	731	...	775	...	775
Lamps and gas mantles	8	2	8	6	57	8	42	40	34	56	141	197
Hydraulic power	2	...	2	...	...	5	1	1	3	6	6	12
Coke works	3	...	...	...	...	4	...	80	...	84	...	84
Total, Class 17	187	91	34	376	93	535	96	2,441	148	3,443	371	3,814
CLASS 18.—LEATHERWARE (EXCEPTING HARNESS AND SADDLERY).												
Fancy leather	16	22	29	27	53	29	51	194	82	272	215	487
Leather belting	5	3	...	4	...	2	...	38	...	47	...	47
Portmanteaux	12	10	3	13	17	12	13	87	45	122	78	200
Other minor works	21	10	6	12	31	17	29	70	51	109	117	226
Total, Class 18	54	45	38	56	101	60	93	389	178	550	410	960
CLASS 19.—MINOR WARES NOT ELSEWHERE INCLUDED.												
Baskets, wickerware, mats, matting	6	...	...	1	...	3	2	16	1	20	3	23
Brooms, brushes	33	15	21	21	41	27	60	153	42	216	164	380
Florists and seedsmen	6	3	14	1	8	...	2	16	12	20	36	56
Laundries—European	118	7	66	15	130	17	224	198	804	237	1,224	1,461
Chinese	12	...	...	...	...	1	...	13	1	14	1	15
Rubber goods	9	22	80	64	115	90	119	532	257	708	571	1,279
Toys	15	...	10	3	10	8	14	35	7	46	41	87
Painting and signwriting	26	2	...	24	2	26	2	209	5	261	9	270
Other minor works	45	26	50	79	50	89	49	465	125	659	274	933
Total, Class 19	270	75	241	208	356	261	472	1,637	1,254	2,181	2,323	4,504
Total, all Industries	7,991	1,815	3,270	5,522	6,069	7,768	7,257	44,289	15,982	59,394	32,578	91,972

Appendix V.

Persons employed, by Class of Factory—1926–30.

Class of Factory.	1926.	1927.	1928.	1929.	1930.
Metropolitan District.					
I. Treating raw material, product of pastoral pursuits	2,231	2,334	1,753	2,005	2,287
II. Oils and fats—animal, vegetable, &c.	770	750	755	692	788
III. Processes relating to stone, clay, glass, &c.	6,757	6,497	6,323	6,006	2,569
IV. Working in wood	5,750	5,445	5,761	5,242	2,920
V. Metal works, machinery, &c.	21,028	19,560	20,087	19,348	13,539
VI. Connected with food and drink, &c.	15,650	16,758	16,352	15,998	14,885
VII. Clothing and textile fabrics, &c.	32,694	32,215	32,219	32,409	26,270
VIII. Books, paper, printing, engraving, &c.	9,772	10,209	9,924	10,441	9,238
IX. Musical instruments, &c.	929	713	738	781	313
X. Arms and explosives	24	18	16	21	14
XI. Vehicles and fittings, saddlery, harness, &c.	5,528	4,771	5,099	5,159	3,268
XII. Ship and boat building, &c.	916	974	465	666	444
XIII. Furniture, bedding, &c.	5,576	5,566	5,112	4,874	2,938
XIV. Drugs, chemicals, and by-products	2,523	2,521	2,338	2,496	2,405
XV. Surgical and other scientific instruments	228	213	206	233	190
XVI. Jewellery and plated-ware, &c.	895	890	1,065	700	626
XVII. Heat, light, and power	3,943	4,274	4,587	4,171	3,814
XVIII. Leatherware (excepting saddlery and harness)	1,330	1,118	1,220	1,241	960
XIX. Minor wares, n.e.i.	5,439	5,105	6,622	4,740	4,504
Total	121,933	119,931	120,642	117,223	91,972
Newcastle District.					
I. Treating raw material, product of pastoral pursuits	193	216	39	188	175
II. Oils and fats—animal, vegetable, &c.	167	139	92	32	29
III. Processes relating to stone, clay, glass, &c.	564	565	485	431	311
IV. Working in wood	1,193	1,062	953	962	634
V. Metal works, machinery, &c.	6,379	6,167	5,859	5,081	4,077
VI. Connected with food and drink, &c.	1,549	1,522	1,659	1,442	1,429
VII. Clothing and textile fabrics, &c.	1,108	972	917	867	834
VIII. Books, paper, printing, engraving, &c.	348	408	414	387	299
IX. Musical instruments, &c.	10	13	11	16	7
XI. Vehicles and fittings, saddlery, harness, &c.	514	482	510	623	499
XII. Ship and boat building, &c.	46	30	27	15	13
XIII. Furniture, bedding, &c.	249	256	220	243	120
XIV. Drugs, chemicals, and by-products	61	53	68	29	110
XV. Surgical and other scientific instruments	6	3	5	5	4
XVI. Jewellery and plated-ware, &c.	25	11	12	12	9
XVII. Heat, light and power	505	617	616	769	400
XVIII. Leatherware (excepting saddlery and harness)	...	...	1	...	...
XIX. Minor wares, n.e.i.	104	139	194	146	131
Total	13,021	12,655	12,082	11,248	9,081
Rest of State.					
I. Treating raw material, product of pastoral pursuits	471	432	348	328	516
II. Oils and fats—animal, vegetable, &c.	25	23	27	32	21
III. Processes relating to stone, clay, glass, &c.	1,342	1,458	1,591	1,547	664
IV. Working in wood	2,928	2,554	2,352	2,561	1,934
V. Metal work, machinery, &c.	2,440	2,536	2,065	2,504	2,205
VI. Connected with food and drink, &c.	3,435	3,675	3,890	3,494	3,674
VII. Clothing and textile fabrics, &c.	1,809	1,726	1,612	1,595	1,279
VIII. Books, paper, printing, engraving, &c.	860	842	781	843	755
IX. Musical Instruments, &c.	...	...	2	11	...
XI. Vehicles and fittings, saddlery, harness, &c.	1,964	1,795	1,965	2,177	2,007
XII. Ship and boat building, &c.	8	1	...	1	3
XIII. Furniture, bedding, &c.	162	133	105	95	61
XIV. Drugs, chemicals, and by-products	59	70	123	57	81
XV. Surgical and other scientific instruments	1	2	8	5	3
XVI. Jewellery and plated-ware, &c.	6	5	2	...	...
XVII. Heat, light and power	885	894	758	878	815
XIX. Minor wares, n.e.i.	223	226	245	276	245
Total	16,618	16,372	15,874	16,404	14,263
State.					
I. Treating raw material, product of pastoral pursuits	2,895	2,982	2,140	2,521	2,978
II. Oils and fats—animal, vegetable, &c.	962	912	874	756	838
III. Processes relating to stone, clay, glass, &c.	8,663	8,520	8,399	7,984	3,544
IV. Working in wood	9,871	9,061	9,066	8,765	5,488
V. Metal work, machinery, &c.	29,847	28,263	28,011	26,933	19,821
VI. Connected with food and drink, &c.	20,634	21,955	21,901	20,934	19,988
VII. Clothing and textile fabrics, &c.	35,611	34,913	34,748	34,871	28,383
VIII. Books, paper, printing, engraving, &c.	10,980	11,459	11,119	11,671	10,292
IX. Musical instruments, &c.	939	726	751	808	320
X. Arms and explosives	24	18	16	21	14
XI. Vehicles and fittings, saddlery, harness, &c.	8,006	7,048	7,574	7,959	5,774
XII. Ship and boat building, &c.	970	1,005	492	682	460
XIII. Furniture, bedding, &c.	5,987	5,955	5,437	5,212	3,119
XIV. Drugs, chemicals, and by-products	2,643	2,644	2,529	2,582	2,596
XV. Surgical and other scientific instruments	235	218	219	243	197
XVI. Jewellery and plated-ware, &c.	926	906	1,079	712	635
XVII. Heat, light, and power	5,333	5,785	5,961	5,818	5,029
XVIII. Leatherware (excepting saddlery and harness)	1,330	1,118	1,221	1,241	960
XIX. Minor wares, n.e.i.	5,766	5,470	7,061	5,162	4,880
Total	151,622	148,958	148,598	144,875	115,316

Appendix VI.

Persons employed, by Age Groups—1926–1930.

METROPOLITAN DISTRICT.

Year.	Number of Factories on Register.	Persons employed.										
		Under 16 years.		Over 16 years and under 18 years.		Over 18 years and under 21 years.		Over 21 years.		Total.		
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1926	6,837	3,666	4,801	7,076	7,268	9,102	9,007	62,674	18,389	82,518	39,465	121,983
1927	6,877	3,462	4,979	7,156	7,387	9,055	8,855	60,723	18,314	80,396	39,535	119,931
1928	6,876	3,398	5,120	7,149	7,226	9,553	8,750	60,141	19,305	80,241	40,401	120,642
1929	7,333	3,243	5,181	7,225	7,460	9,042	8,641	58,451	17,980	77,961	39,262	117,223
1930	7,991	1,815	3,270	5,522	6,069	7,768	7,257	44,289	15,982	59,394	32,578	91,972
NEWCASTLE DISTRICT.												
1926	1,217	247	158	829	272	918	365	9,758	474	11,752	1,269	13,021
1927	1,147	239	141	808	234	1,031	297	9,483	422	11,561	1,094	12,655
1928	1,181	190	96	786	234	1,031	272	9,010	463	11,017	1,065	12,082
1929	1,314	160	124	698	253	937	273	8,353	450	10,148	1,100	11,248
1930	1,300	94	72	547	196	833	229	6,714	396	8,188	893	9,081
REST OF STATE.												
1926	3,775	337	136	1,061	241	1,254	309	12,728	552	15,380	1,238	16,618
1927	3,389	391	155	1,139	290	1,424	322	12,107	544	15,061	1,311	16,372
1928	3,364	327	122	1,035	262	1,338	278	12,019	493	14,719	1,155	15,874
1929	3,663	353	123	1,105	239	1,468	284	12,312	520	15,238	1,166	16,404
1930	3,938	177	79	1,010	197	1,231	216	10,946	407	13,364	899	14,263
STATE.												
1926	11,829	4,250	5,095	8,966	7,781	11,274	9,681	85,160	19,415	109,650	41,972	151,622
1927	11,413	4,092	5,275	9,103	7,911	11,510	9,474	82,313	19,280	107,018	41,940	148,958
1928	11,421	3,915	5,338	8,970	7,722	11,922	9,300	81,170	20,261	105,977	42,621	148,598
1929	12,310	3,756	5,428	9,028	7,952	11,447	9,198	79,116	18,950	103,347	41,528	144,875
1930	13,229	2,086	3,421	7,079	6,462	9,832	7,702	61,949	16,785	80,946	34,370	115,316

Appendix VII.

Horse-power of Machinery, by Class of Factory and Method of Production, Classified by Industry, 1930.

METROPOLITAN DISTRICT.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
CLASS 1.—TREATING RAW MATERIAL, THE PRODUCT OF PASTORAL PURSUITS.									
(a) *Animal Products.*									
Boiling-down and tallow refining	4	60	54	...	...	...	5	232	197
Glue	...	...	...	...	...	...	2	730	609
Tanning	6	325	170	5	244	140	48	2,441	1,827
Woolscouring and fellmongering	10	742	459	1	18	18	20	2,481	2,004
Other animal products	2	915	515	...	...	...	11	1,008	944
Total	22	2,042	1,198	6	262	158	86	6,892	5,581
(b) *Vegetable Products.*									
Chaff-cutting	...	...	...	...	...	...	15	803	535
Total, Class 1	22	2,042	1,198	6	262	158	101	7,695	6,116
CLASS 2.—OILS AND FATS—ANIMAL AND VEGETABLE.									
Oil and grease	3	118	99	...	...	...	10	1,087	833
Soap, candles, &c.	5	1,152	381	...	...	...	8	2,280	1,764
Total, Class 2	8	1,270	480	...	...	...	18	3,367	2,597
CLASS 3.—PROCESSES IN STONE, CLAY, GLASS, &C.									
Asphalt	1	12	12	...	...	...	15	317	221
Bricks and tiles	11	1,990	559	2	60	45	57	8,133	3,334
Glass and glass bottles	2	1,010	602	...	...	...	2	740	643
Glass (ornamental)	...	...	...	1	4	3	26	1,087	947
Lime, plaster, and cement	...	...	...	...	...	...	7	130	114
Marble and slate	...	...	...	1	8	8	17	973	736
Modelling and fibrous plaster	...	...	...	...	...	...	13	96	90
Monumental masonry	...	...	...	...	...	...	3	397	382
Pottery and earthenware	2	380	182	1	35	30	11	1,136	895
Stone-dressing	1	10	7	...	...	...	16	1,162	864
Other works	1	200	200	3	386	204	20	1,343	772
Total, Class 3	18	3,602	1,562	8	493	290	187	15,514	8,998

Appendix VII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
Class 4.—Working in Wood.									
Beehives, &c.	...	...	...	1	5	5	1	2	2
Boxes and packing-cases	2	500	450	...	...	...	49	1,417	1,058
Cooperage	...	...	...	...	...	...	11	360	201
Joinery	3	143	81	12	151	114	214	7,085	5,451
Saw-milling—timber	19	3,408	1,725	...	...	...	58	6,473	3,593
firewood	16	246	192	2	34	27	19	199	180
Wood-turning	...	...	...	...	...	...	13	254	228
Other works	1	15	15	...	...	...	40	592	480
Total, Class 4	41	4,312	2,463	15	190	146	405	16,382	11,193
Class 5.—Metal Works, Machinery, &c.									
Agricultural implements	...	...	...	1	120	75	6	108	88
Brass and copper	...	...	...	2	21	3	75	733	589
Cutlery	...	...	...	...	...	...	24	238	205
Engineering	15	3,525	2,561	9	111	91	272	9,153	7,305
Galvanised iron	1	8	6	2	100	58	58	1,426	1,175
Iron works, foundries, and boiler-making	5	335	244	5	50	38	134	10,710	8,329
Iron safes and doors	...	...	...	...	...	...	4	211	163
Lead-mills	...	...	...	...	...	...	4	407	407
Railway carriage works	1	450	184	...	...	...	2	1,088	586
Smelting and ore-dressing	...	...	...	...	...	...	3	53	35
Stoves and ovens	...	...	...	...	...	...	7	1,573	1,126
Tinsmithing	3	56	24	1	188	120	18	1,127	852
Wire-working	...	...	...	...	...	...	28	3,200	3,058
Other metal works	1	4	4	...	...	...	115	3,214	2,131
Plumbing	...	...	...	...	...	...	11	64	57
Farriery	...	...	...	...	...	...	5	5	5
Total, Class 5	26	4,378	3,023	20	590	385	766	33,310	26,111
Class 6.—Food and Drink and Preparation thereof.									
(a) Animal Food.									
Bacon	3	113	100	...	...	...	8	460	390
Butchers' small-goods	6	179	93	6	86	63	736	3,372	3,208
Margarine	1	25	20	...	...	...	1	132	130
Meat-preserving	...	...	...	1	8	8	8	543	502
Total	10	317	213	7	94	71	753	4,507	4,230
(b) Vegetable Foods, including products not Food, but connected with the manufacture of foods.									
Biscuits	2	158	133	...	...	...	11	1,990	975
Bread and pastry	10	236	151	4	27	23	383	2,667	2,357
Confectionery	9	2,676	1,378	2	151	50	83	5,668	3,615
Corn-flour and oatmeal	...	...	...	...	...	...	16	1,329	1,235
Flour-milling	2	1,035	836	...	...	...	17	3,233	2,798
Jam and fruit preserving	3	49	44	...	...	...	15	314	282
Pickles, sauces, and vinegar	3	40	20	1	18	...	9	602	471
Poultry foods and dog biscuits	...	...	...	...	...	...	12	333	211
Self-raising flour	...	...	...	...	...	...	4	270	231
Sugar refining	1	255	215	...	...	...	2	3,201	1,895
Total	30	4,449	2,777	7	196	73	552	19,607	14,070
(c) Drinks and Stimulants.									
Aerated waters and cordials	6	95	84	2	15	11	28	741	489
Brewing	5	3,545	1,638	...	...	...	7	5,879	4,303
Condiments, coffee, spices, &c.	5	495	444	1	4	4	28	697	616
Distillery	...	...	...	...	...	...	1	62	42
Ice and refrigerating	9	4,287	3,041	9	642	515	107	9,018	7,863
Tea-blending and packing	1	7	7	...	...	...	14	403	399
Wines and spirits	1	33	33	...	...	...	17	132	125
Total	27	8,462	5,247	12	661	530	202	16,932	13,837
(d) Narcotics.									
Tobacco, cigars, and cigarettes	2	1,958	1,105	...	...	...	7	1,808	927
Total, Class 6	69	15,186	9,342	26	951	674	1,514	42,854	33,064

Appendix VII—*continued.*

Class of Factory	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal	Actually used.
Class 7.—Clothing and Textile Fabrics, and Fibrous Materials.									
(a) Textile.									
Woollen mills	5	683	633	1	220	180	30	7,218	5,893
(b) Dress.									
Boots and shoes—order made	2	9	4	2	8	8	705	1,194	1,081
factory made	...	...	...	...	...	...	92	1,941	1,821
Clothing—men's slops	1	100	80	1	1	1	38	257	191
women's slops	...	...	...	...	...	...	120	515	345
tailoring	...	...	...	...	...	...	63	259	213
Corsets	...	...	...	...	...	...	2	104	91
Dressmaking and Millinery—makers' material	3	115	58	...	...	...	90	553	522
customers' material	...	...	...	...	...	...	33	37	37
Dye works	6	40	32	...	...	...	28	444	361
Furriery...	1	8	4	...	...	...	15	143	139
Hats and caps	1	3	2	...	...	...	25	755	614
Hosiery and knitting	2	26	14	1	20	10	64	2,191	1,809
Oilskin and waterproof clothing	1	4	4	...	...	...	5	19	15
Shirts, ties, and scarves	...	...	...	...	...	...	53	508	447
Umbrellas	...	...	...	...	...	...	5	14	14
Underclothing	...	...	...	...	...	...	93	277	253
Wigs and hairwork	...	...	...	...	...	...	3	41	33
Total	17	305	198	4	29	19	1,434	9,252	7,986
(c) Fibrous Materials and Textiles not elsewhere included.									
Bags and sacks...	...	...	...	...	...	...	4	190	161
Rope and twine	...	...	...	...	...	...	6	689	670
Tents and tarpaulins	...	...	...	...	...	...	15	45	33
Total	...	...	...	...	...	...	25	924	864
Total, Class 7	22	988	831	5	249	199	1,489	17,394	14,743
Class 8.—Books, Paper, Printing, Engraving.									
Die-sinking and engraving	...	...	...	...	...	...	19	101	85
Electro-typing, stereo-typing, type-founding, printers' materials...	2	16	5	...	...	...	17	963	790
Paper bags and boxes	...	...	...	...	...	...	19	664	537
Paper-mills, cardboard, and strawboard	2	310	270	...	...	...	10	359	248
Photo.-engraving, photo.-lithography, and photo. materials	...	...	...	...	...	...	13	163	135
Printing, bookbinding, and manufacturing stationery ...	...	...	...	11	200	146	359	11,769	8,042
Total, Class 8	4	326	275	11	200	146	437	14,019	9,837
Class 9.—Musical Instruments, &c.									
Pianos, organs, and sewing-machines	1	500	200	...	...	...	20	1,342	1,136
Class 10.—Arms and Explosives.									
Explosives	...	...	...	...	...	...	3	34	30
Class 11.—Vehicles and Fittings, Saddlery, Harness, &c.									
Coaches and waggons	1	8	6	1	14	14	37	370	249
Cycles and motor-cars...	9	308	167	7	53	44	512	4,316	3,191
Perambulators, &c.	...	...	...	...	...	...	5	30	24
Saddlery and harness, &c.	...	...	...	...	...	...	9	42	28
Naves, spokes, &c.	...	...	...	...	...	...	...	...	...
Whips	...	...	...	...	...	...	...	...	...
Total, Class 11	10	316	173	8	67	58	563	4,758	3,495
Class 12.—Shipbuilding, Fittings, &c.									
Docks and slips	...	...	...	...	...	...	1	25	13
Sailmaking	...	...	...	...	...	...	3	7	7
Ship and boat building	6	1,712	1,143	3	33	23	25	3,480	2,618
Total, Class 12	6	1,712	1,143	3	33	23	29	3,512	2,638

Appendix 7—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
Class 13.—Furniture, Bedding.									
Bedding flock and upholstery	1	50	50	...	...	...	74	1,439	1,153
Carpet-sewing	...	...	...	...	...	...	3	39	30
Iron bedsteads	...	...	...	...	...	...	3	109	109
Billiard-tables	...	...	...	...	...	...	...	...	...
Chair-making	...	...	...	1	5	5	18	334	182
Furniture and Cabinetmaking—European	1	40	30	2	8	5	190	4,553	3,173
Chinese	...	...	...	...	...	...	4	61	61
Bamboo and Wicker	...	...	...	...	...	...	1	5	5
Picture frames	...	...	...	...	...	...	15	77	58
Window blinds	...	...	...	...	...	...	8	122	71
Total, Class 13	2	90	80	3	13	10	316	6,739	4,842
Class 14.—Drugs, Chemicals, and By-products.									
Baking-powder, blue, soda, &c.	1	15	8	...	...	...	12	876	672
Chemical works and drugs	6	92	46	1	5	4	60	2,149	1,504
Fertilisers	1	12	7	...	...	...	5	220	192
Perfumes and essences	1	5	2	...	...	...	16	168	154
Paints and varnishes	...	...	...	...	...	...	27	3,148	1,697
Other minor works	1	8	4	...	...	...	6	635	403
Total, Class 14	10	132	67	1	5	4	126	7,196	4,622
Class 15.—Surgical and Scientific Appliances.									
Optical instruments	...	...	...	...	...	...	26	96	88
Surgical instruments	...	...	...	...	...	...	9	21	20
Other minor works	...	...	...	...	...	...	4	5	5
Total, Class 15	...	...	...	...	...	...	39	122	113
Class 16.—Time-pieces, Jewellery, and Plated Ware.									
Electro-plating	...	...	...	1	3	...	34	440	330
Jewellery	...	...	...	...	...	...	52	497	421
Total, Class 16	...	...	...	1	3	...	86	937	751
Class 17.—Light, Heat, and Power.									
Electrical apparatus	...	...	...	...	...	...	118	2,516	2,102
Electric light and power works	2	123,460	105,460	12	758	607	43	6,914	6,571
Gas works	3	2,851	1,431	4	896	678	6	3,964	1,579
Lamps and gas mantles	...	...	...	1	6	6	7	167	145
Hydraulic power	1	25	22	...	...	...	2	56	56
Coke works	1	90	70	...	...	...	2	602	431
Total, Class 17	7	126,426	106,983	17	1,660	1,291	178	14,219	10,884
Class 18.—Leatherware (excepting Harness and Saddlery).									
Fancy leather	2	18	8	...	...	...	14	599	497
Leather belting	...	...	...	...	...	...	5	202	151
Portmanteaux	...	...	...	...	...	...	9	133	84
Other minor works	1	20	10	...	...	...	18	96	96
Total, Class 18	3	38	18	...	...	...	46	1,030	828
Class 19.—Minor Wares (not elsewhere included).									
Baskets, wickerware, mats, matting	...	...	...	...	...	...	2	3	3
Brooms and brushes	...	...	...	...	...	...	31	208	185
Florists and seedsmen	...	...	...	...	...	...	2	41	34
Laundries—European	11	155	34	2	12	10	112	1,307	1,185
,, Chinese	...	...	...	...	...	...	1	10	5
Rubber goods	2	477	445	...	...	...	9	15,925	11,739
Toys	...	...	...	1	4	4	13	90	84
Painting and signwriting	...	...	...	...	...	...	18	103	95
Other minor works	...	...	...	1	3	2	34	1,760	873
Total, Class 19	13	623	479	4	19	16	222	19,447	14,203
Total, all Industries	262	161,950	128,317	128	4,735	3,400	6,545	209,871	156,201

Appendix VIII.

Horse-power of Machinery used and Method of Production, by Class of Factory, 1930.

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
STATE.									
I. Treating raw materials, product of pastoral pursuits	64	4,019	1,779	10	319	200	139	8,814	7,062
II. Oils and fats—animal, vegetable, &c.	15	1,359	541	...	...	...	20	3,387	2,615
III. Processes in stone, clay, glass, &c.	65	17,550	10,477	11	604	338	285	41,631	25,676
IV. Working in wood	350	13,121	9,729	58	667	526	787	23,182	16,419
V. Metal works, machinery, &c.	40	87,700	49,321	32	734	482	910	81,639	55,386
VI. Connected with food and drink, &c.	194	24,394	15,803	152	4,218	3,267	2,640	62,765	45,796
VII. Clothing and textile fabrics, &c.	30	1,625	1,231	9	372	256	1,740	20,070	16,438
VIII. Books, paper, printing, and engraving, &c.	8	341	285	32	368	231	646	15,995	11,236
IX. Musical instruments, &c.	1	500	200	...	...	...	21	1,343	1,137
X. Arms and explosives, &c.	...	...	...	...	...	...	3	34	30
XI. Vehicles and fittings, saddlery and harness, &c.	33	504	307	68	384	278	1,336	8,327	6,348
XII. Ship and boat building, &c.	8	1,742	1,161	5	40	27	31	3,523	2,649
XIII. Furniture, bedding, &c.	2	90	80	6	28	23	369	7,273	5,220
XIV. Drugs, chemicals, and by-products	10	132	67	1	5	4	135	12,349	6,607
XV. Surgical and other scientific instruments	...	...	...	...	...	...	42	126	117
XVI. Jewellery and plated-ware, &c.	...	...	...	1	3	...	90	960	772
XVII. Heat, light, and power	38	148,980	121,505	90	7,713	6,100	456	48,339	33,326
XVIII. Leatherware, n.e.i.	3	38	18	...	...	...	46	1,030	828
XIX. Minor wares, n.e.i.	30	784	602	7	83	54	264	19,919	14,544
Total	891	302,879	213,106	482	15,538	11,786	9,960*	360,706	252,206
METROPOLITAN DISTRICT.									
I. Treating raw materials, product of pastoral pursuits	22	2,042	1,198	6	262	158	101	7,695	6,116
II. Oils and fats—animal, vegetable, &c.	8	1,270	480	...	...	...	18	3,367	2,597
III. Processes in stone, clay, glass, &c.	18	3,602	1,562	8	493	290	187	15,514	8,998
IV. Working in wood	41	4,312	2,463	15	190	146	405	16,382	11,193
V. Metal works, machinery, &c.	26	4,378	3,023	20	590	385	766	33,310	26,111
VI. Connected with food and drink, &c.	69	15,186	9,342	26	951	674	1,514	42,854	33,064
VII. Clothing and textile fabrics, &c.	22	988	831	5	249	199	1,489	17,394	14,743
VIII. Books, paper, printing, and engraving, &c.	4	326	275	11	200	146	437	14,019	9,837
IX. Musical instruments, &c.	1	500	200	...	...	...	20	1,342	1,136
X. Arms and explosives, &c.	...	...	...	...	...	...	3	34	30
XI. Vehicles and fittings, saddlery and harness, &c	10	316	173	8	67	58	563	4,758	3,495
XII. Ship and boat building, &c.	6	1,712	1,143	3	33	23	29	3,512	2,638
XIII. Furniture, bedding, &c.	2	90	80	3	13	10	316	6,739	4,842
XIV. Drugs, chemicals, and by-products	10	132	67	1	5	4	126	7,196	4,622
XV. Surgical and other scientific instruments	...	...	...	...	...	...	39	122	113
XVI. Jewellery and plated-ware, &c.	...	...	...	1	3	...	86	937	751
XVII. Heat, light, and power	7	126,426	106,985	17	1,660	1,291	178	14,219	10,884
XVIII. Leatherware, n.e.i.	3	38	18	...	...	...	46	1,030	828
XIX. Minor wares, n.e.i.	13	632	479	4	19	16	222	19,447	14,203
Total	262	161,950	128,317	128	4,735	3,400	6,545	209,871	156,201
NEWCASTLE DISTRICT.									
I. Treating raw materials, product of pastoral pursuits	...	...	...	...	...	...	13	773	710
II. Oils and fats—animal, vegetable, &c.	3	60	36	...	...	...	2	20	18
III. Processes in stone, clay, glass, &c.	14	1,005	780	...	...	...	27	516	329
IV. Working in wood	62	2,193	1,891	7	56	33	95	2,126	1,684
V. Metal works, machinery, &c.	5	61,383	29,725	3	46	30	66	22,985	22,816
VI. Connected with food and drink, &c.	36	2,154	1,228	28	451	267	278	5,965	3,984
VII. Clothing and textile fabrics, &c.	2	9	8	...	...	...	93	342	292
VIII. Books, paper, printing and engraving, &c.	...	...	...	5	85	48	36	685	513
IX. Musical instruments, &c.	...	...	...	...	...	...	1	1	1
X. Arms and explosives, &c.	...	...	...	...	...	...	...	...	...
XI. Vehicles and fittings, saddlery and harness, &c.	6	105	75	8	43	29	132	613	487
XII. Ship and boat building, &c.	2	30	18	1	3	2	1	7	7
XIII. Furniture, bedding, &c.	...	...	...	1	8	6	28	256	268
XIV. Drugs, chemicals, and by-products	...	...	...	...	...	...	5	4,281	1,645
XV. Surgical and other scientific instruments	...	...	...	...	...	...	2	3	3
XVI. Jewellery and plated-ware, &c.	...	...	...	...	...	...	4	23	21
XVII. Heat, light, and power	9	12,713	6,211	8	633	433	59	3,830	2,309
XVIII. Leatherware, n.e.i.	...	...	...	...	...	...	...	...	...
XIX. Minor wares, n.e.i.	1	16	10	1	30	10	15	244	194
Total	140	79,668	39,982	62	1,355	858	857	42,770	35,281

* In many factories more than one kind of power is used. The figures, therefore, are in excess of the actual number of factories using power.

Appendix VIII—*continued.*

Class of Factory.	Steam.			Gas.			Electricity, &c.		
	No. of Factories.	Horse-power.		No. of Factories.	Horse-power.		No. of Factories.	Horse-power.	
		Nominal.	Actually used.		Nominal.	Actually used.		Nominal.	Actually used.
Rest of State.									
I. Treating raw materials, product of pastoral pursuits	41	777	581	4	57	42	25	346	236
II. Oils and fats—animal, vegetable, &c.	4	29	25	...	...	...	...	...	...
III. Processes in stone, clay, glass, &c.	34	14,143	8,135	3	111	48	71	25,601	16,349
IV. Working in wood	247	6,616	5,375	36	421	347	287	4,674	3,542
V. Metal works, machinery, &c.	9	21,939	16,573	9	98	67	78	25,344	6,459
VI. Connected with food and drink, &c.	89	7,054	5,233	98	2,816	2,326	848	13,946	8,748
VII. Clothing and textile fabrics, &c.	6	628	392	4	123	57	158	2,334	1,403
VIII. Books, paper, printing, engraving, &c.	4	15	10	16	83	37	173	1,291	886
IX. Musical instruments, &c.	...	...	...	...	...	...	...	...	...
X. Arms and explosives	...	...	...	...	...	...	...	...	...
XI. Vehicles and fittings, saddlery and harness, &c. ...	17	83	59	52	274	191	641	2,956	2,366
XII. Ship and boat building, &c.	...	...	...	1	4	2	1	4	4
XIII. Furniture, bedding, &c.	...	...	...	2	7	7	25	178	110
XIV. Drugs, chemicals, and by-products	...	...	...	...	...	...	4	872	340
XV. Surgical and other scientific instruments	...	...	...	...	...	...	1	1	1
XVI. Jewellery and plated-ware, &c.	...	...	...	...	...	...	...	...	...
XVII. Heat, light, and power	22	9,841	8,311	65	5,420	4,376	219	30,290	20,133
XVIII. Leatherware, n.e.i.	...	...	...	...	...	...	...	...	...
XIX. Minor wares, n.e.i.	16	136	113	2	34	28	27	228	147
Total	489	61,261	44,807	292	9,448	7,528	2,558	108,065	60,724

Appendix IX.

Horse-power of Machinery used and Method of Production—1926–1930.

Year.	Steam.		Gas.		Electricity and other.		Total.	
	No. of Factories.	Horse power.	No. of Factories.	Horse-power.	No. of Factories.	Horse-power.	*No. of Factories.	Horse-power.
Metropolitan District.								
1926	369	100,314	250	5,836	5,403	113,152	6,022	219,302
1927	330	96,942	197	5,530	5,694	132,194	6,230	234,666
1928	289	100,166	177	4,518	5,677	135,780	6,143	240,464
1929	281	75,322	163	7,274	†6,112	197,526	6,556	281,122
1930	262	128,317	128	3,400	†6,454	156,201	6,935	287,918
Newcastle District.								
1926	209	43,933	130	1,641	461	16,720	800	62,297
1927	170	41,214	76	1,373	685	17,949	931	60,536
1928	151	40,789	73	1,753	730	36,920	954	79,453
1929	147	69,903	57	1,389	†873	46,800	1,077	118,092
1930	140	39,982	62	858	†857	35,281	1,059	76,121
Rest of State.								
1926	711	37,673	513	10,938	1,655	29,409	2,879	78,020
1927	575	45,333	416	9,367	1,695	33,543	2,686	88,243
1928	483	36,721	396	9,961	1,885	48,610	2,764	95,292
1929	280	61,140	365	10,600	†2,087	88,350	2,732	160,099
1930	489	44,807	292	7,523	†2,558	60,724	3,339	113,059
State.								
1926	1,289	181,923	893	18,415	7,519	159,281	9,701	359,619
1927	1,084	183,489	689	16,270	8,074	183,686	9,847	383,445
1928	923	177,667	646	16,232	8,292	221,310	9,861	415,209
1929	708	206,365	585	19,272	†9,072	332,676	10,365	558,313
1930	891	213,105	482	11,786	†9,960	252,206	11,333	477,098

In many factories more than one kind of power is used; the figures in this column, therefore, are in excess of the actua number of factories using power

† Including 70 factories using oil of 3,291 horse-power (Metropolitan District).

„ 91 „ 1,976 „ (Newcastle District)

„ 394 „ 10,948 „ (Rest of State)

„ 555 „ 16,125 „ (State).

Appendix X.—Accidents by Machinery, 1927–30.

Machines.	1927.	1928.	1929.	1930.
Metal Working Machines—				
Drills	19	36	46	30
Emery wheels	25	53	98	91
Guillotines	9	6	13	9
Lathes	31	34	67	55
Milling	6	5	13	11
Polishing	16	16	27	11
Power presses	21	36	40	36
Riveting	1	2	4	10
Rolling	6	5	6	2
Screwing	1	2	1	2
Shaping	4	3	5	2
Shears	7	8	13	9
Slotting	1	1	...	1
Steam hammers	3	5	4	7
Wire-working	67	63	43	18
Other tinsmiths' machines	10	5	4	23
Other ironworking machines	32	57	76	42
	259	337	460	372
Woodworking Machines—				
Band saws	8	13	18	24
Boring	1	1	10	4
Circular moulders	18	17	38	28
Circular saws	48	70	101	86
Jointers	22	20	53	30
Lathes	5	5	8	4
Planers	15	15	17	8
Other woodworking machines	30	36	47	57
	147	177	292	241
Printing Machines—				
Cardboard box machines	1	12	...	3
Envelope machines	2	1	1	5
Guillotines	...	4	5	...
Platens	12	9	11	5
Printing machines	9	11	26	19
Wire-stitching machines	16	10	16	15
Other printing machines	57	58	64	53
	97	105	123	100
Food and Drink Machines—				
Biscuit machines	2	10	6	2
Confectionery machines	8	6	7	16
Dough brakes	...	9	5	5
Mincing	8	6	9	6
Mixing	4	...	2	..
Tobacco	11	13	9	10
Other food and drink machines	33	40	59	45
	66	84	97	84

Machines.	1927.	1928.	1929.	1930.
Stone, clay, &c., Machines—				
Brick presses	1	1	10	2
Pans	...	...	..	...
Tile presses	2	2	2	...
Other stone, &c., machines	4	21	20	11
	7	24	32	13
Leather Working Machines—				
Power presses	2	2	...	2
Rolling	...	1	1	3
Other leather machines	9	14	14	11
	11	17	15	16
Clothing Machines—				
Boot machines	22	9	27	19
Fur-cutting	...	2	...	...
Sewing	8	4	26	17
Wool machines	27	30	25	28
Other clothing machines	8	23	33	36
	65	68	111	100
Laundry Machines—				
Calenders	3	...	2	2
Hydro-extractors	...	...	...	2
Ironing	3	2	4	3
Other Laundry machines	4	3	5	...
	10	5	11	7
Rubber Working Machines—				
Rolling	...	2	1	1
Other rubber machines	19	41	58	34
	19	43	59	35
Paintmaking machines	1	1	1	2
Soapmaking machines	2	7	2	10
Other machines	25	8	27	32
Miscellaneous—				
Elevators and cranes	13	11	23	36
Engines	...	...	...	...
Fan	...	...	1	...
Mill gearing	43	43	62	53
	84	70	116	133
Total	765	930	1,316	1,10

Appendix XI.—Prosecutions by Districts, 1926–30.

Year.	Information Laid.	Convictions.	Dismissa's.	Withdrawals.
		Metropolitan.		
1926	79	72	4	3
1927	57	56	.....	1
1928	163	73	1	89
1929	196	155	2	39
1930	184	53	6	125*
		Newcastle		
1926	5	5	.....	.....
1927	.....	.....	.....	.....
1928	12	2	.....	10
1929	55	33	.....	22
1930	17	5	1	11
		Rest of State.		
1926	6	6	.....	.....
1927	2	1	1	.....
1928	2	.....	.....	2
1929	280	159	1	120
1930	201	62	.....	139†
		The State.		
1926	90	83	4	3
1927	59	57	1	1
1928	215	113	1	101
1929	531	347	3	181
1930	402	120	7	275

* Including 13 summonses not served. Order made by Magistrate in one instance. † Including 16 summonses not served.

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